Utah Department of Transportation
Traffic Management Division

February 2018

Monthly Report

2060 South 2760 West Salt Lake City, Utah 84104 801-887-3710 www.udottraffic.utah.gov

Mission of the Traffic Management Division

- To Support UDOT and the Department of Public Safety to Achieve Zero Fatalities.
- To Help Provide Reliable and Efficient Travel Throughout Utah.
- To Provide Useful and Timely Real-time Traffic Information.
- To Work Together with Other Government Agencies to Serve the Public.
- To Provide Excellent Customer Service.

Traffic Operations Center

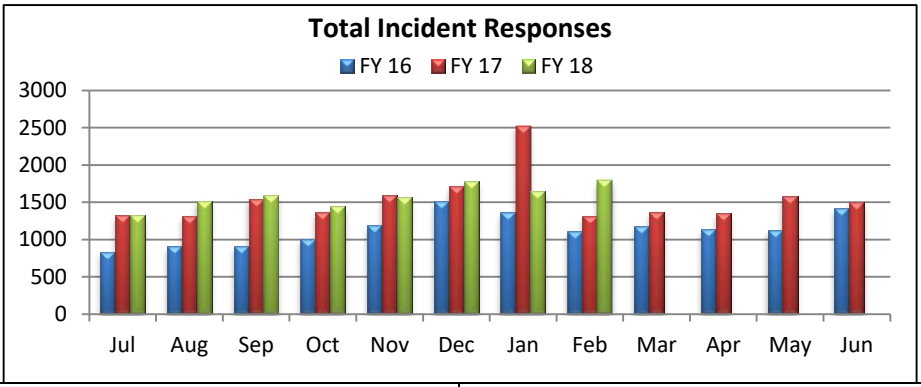
Field Devices Summary

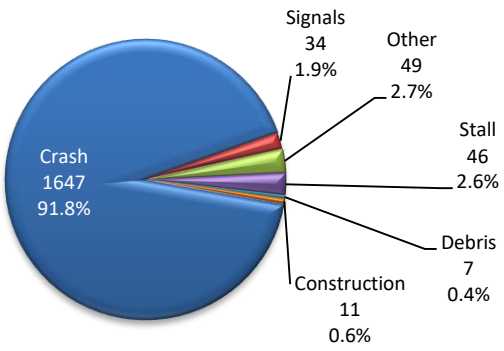
Freeway PTZ Cameras	402
Surface Street PTZ Cameras	573
RWIS & Contracted Weather Cameras	234
Viewable Detection Cameras	38
Total Cameras	1,247
Freeway VMS	104
Surface Street VMS	50
Portable TOC VMS	7
Legacy Trucks Prohibited VMS	21
Variable Speed Limit VMS	15
Chain-Up / Avalanche Warning Signs	25
Total VMS	222
HAR (25 permanent/5 portable)	30
RWIS	110
Ramp Meters	75
TMS	608
Express Lane Plazas	73
Traffic Signals	1,855

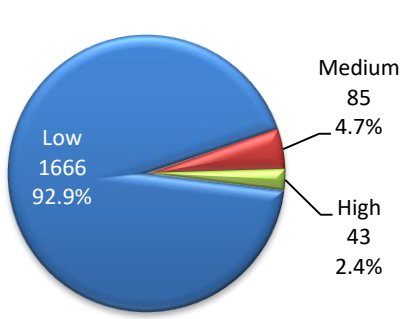
Operations Summary

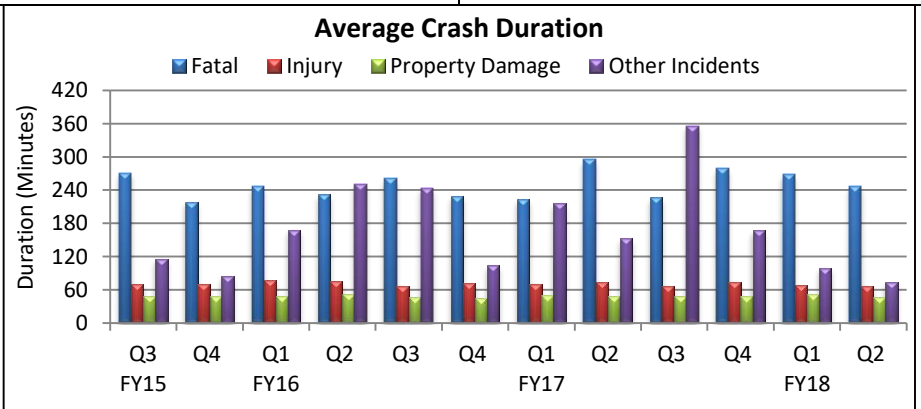
VMS Messages Displayed	84,940
Signal Timing Work Orders	24
Signal Maintenance Work Orders	109
All New Work Orders	405
Work Orders Closed During the Month	440
Incident Responses by the TOC	1,749
Incident Duration Average Minutes	52
IMT Assists	2,221
Website Visitor Sessions	426,963
511 Calls	27,541
Weather Desk Calls	796
Ask Commuterlink Questions	69
Average Speed AM Peak (07:00-08:00)	66.05
Average Speed PM Peak (17:00-18:00)	62.83
Incidents Using Signal Timing Assistance	276
UDOT Traffic Followers and Re-tweets	916,796
UDOT Traffic App Total Downloads	19,515

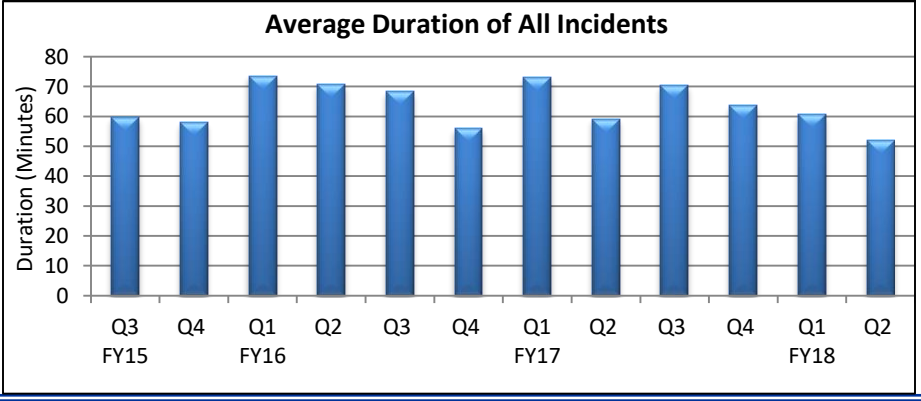
An incident response occurs each time an incident is recorded in the ATMS system. These can be of several types, including crash, construction, debris, stall, congestion, or other. Crashes are separated into three subcategories: property damage, personal injury, and fatal. Each time an incident is created, information is sent to the 511 system, the website, and to the public through email alerts. An incident remains active until it has been completely cleared from the roadway.

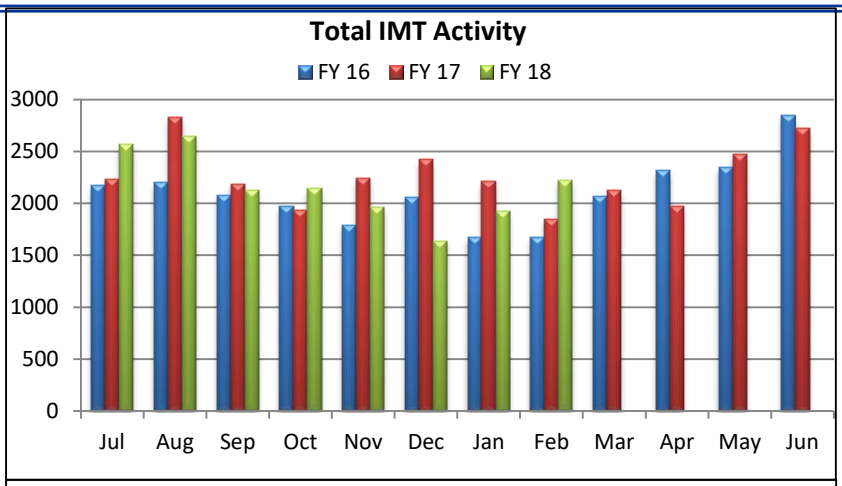


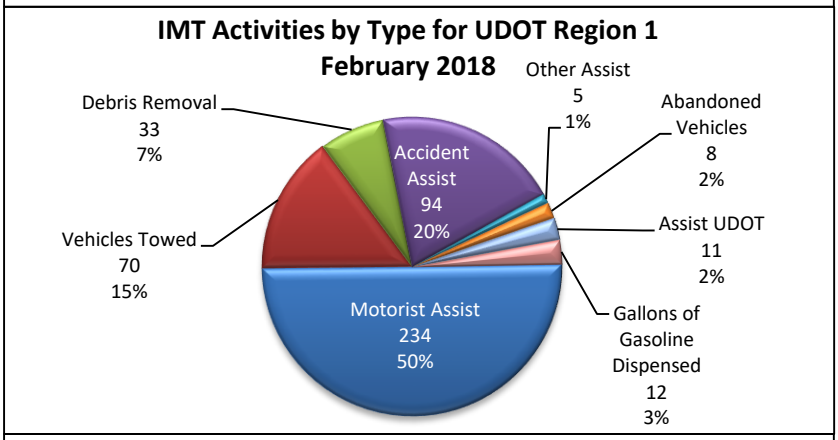


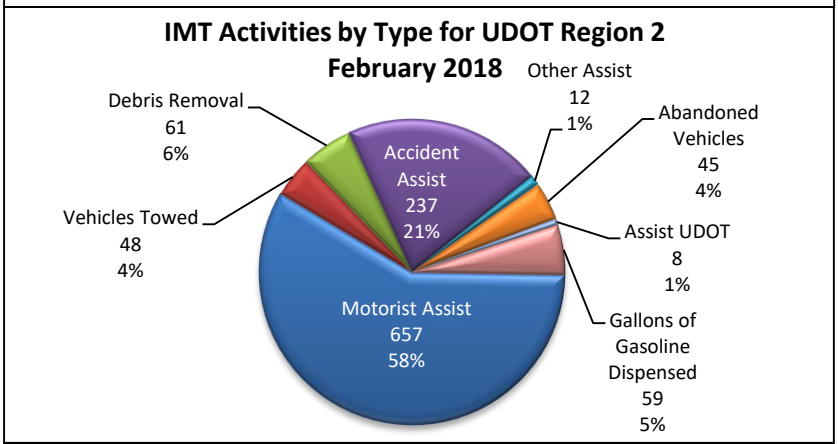


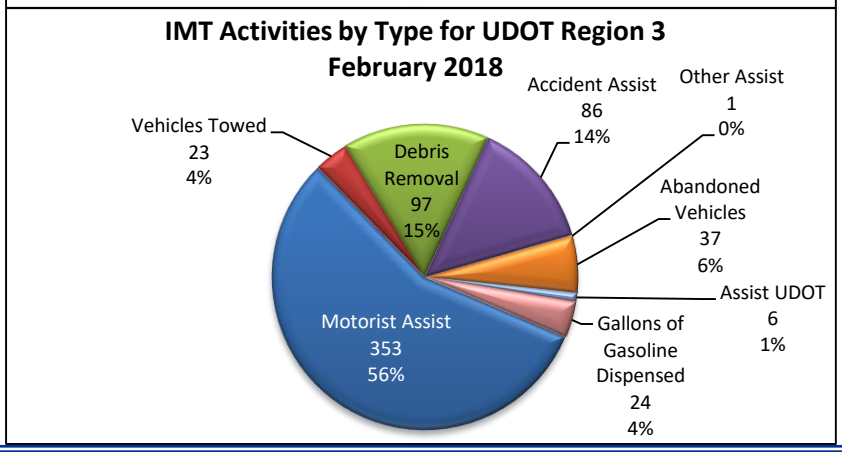





Total IMT Activity
FY 16
FY 17
FY 18
3000
2500
2000
1500
1000
500
0
Jul
Aug
Sep
Oct
Nov
Dec
Jan
Feb
Mar
Apr
May
Jun


IMT Activities by Type for UDOT Region 1
February 2018
Debris Removal
33
7%
Other Assist
5
1%
Abandoned
Vehicles
8
2%
Accident
Assist
94
20%
Vehicles Towed
70
15%
Assist UDOT
11
2%
Motorist Assist
234
50%
Gallons of
Gasoline
Dispensed
12
3%


IMT Activities by Type for UDOT Region 2
February 2018
Debris Removal
61
6%
Other Assist
12
1%
Abandoned
Vehicles
45
4%
Accident
Assist
237
21%
Vehicles Towed
48
4%
Assist UDOT
8
1%
Motorist Assist
657
58%
Gallons of
Gasoline
Dispensed
59
5%


IMT Activities by Type for UDOT Region 3
February 2018
Accident Assist
86
14%
Other Assist
1
0%
Vehicles Towed
23
4%
Debris
Removal
97
15%
Abandoned
Vehicles
37
6%
Assist UDOT
6
1%
Motorist Assist
353
56%
Gallons of
Gasoline
Dispensed
24
4%

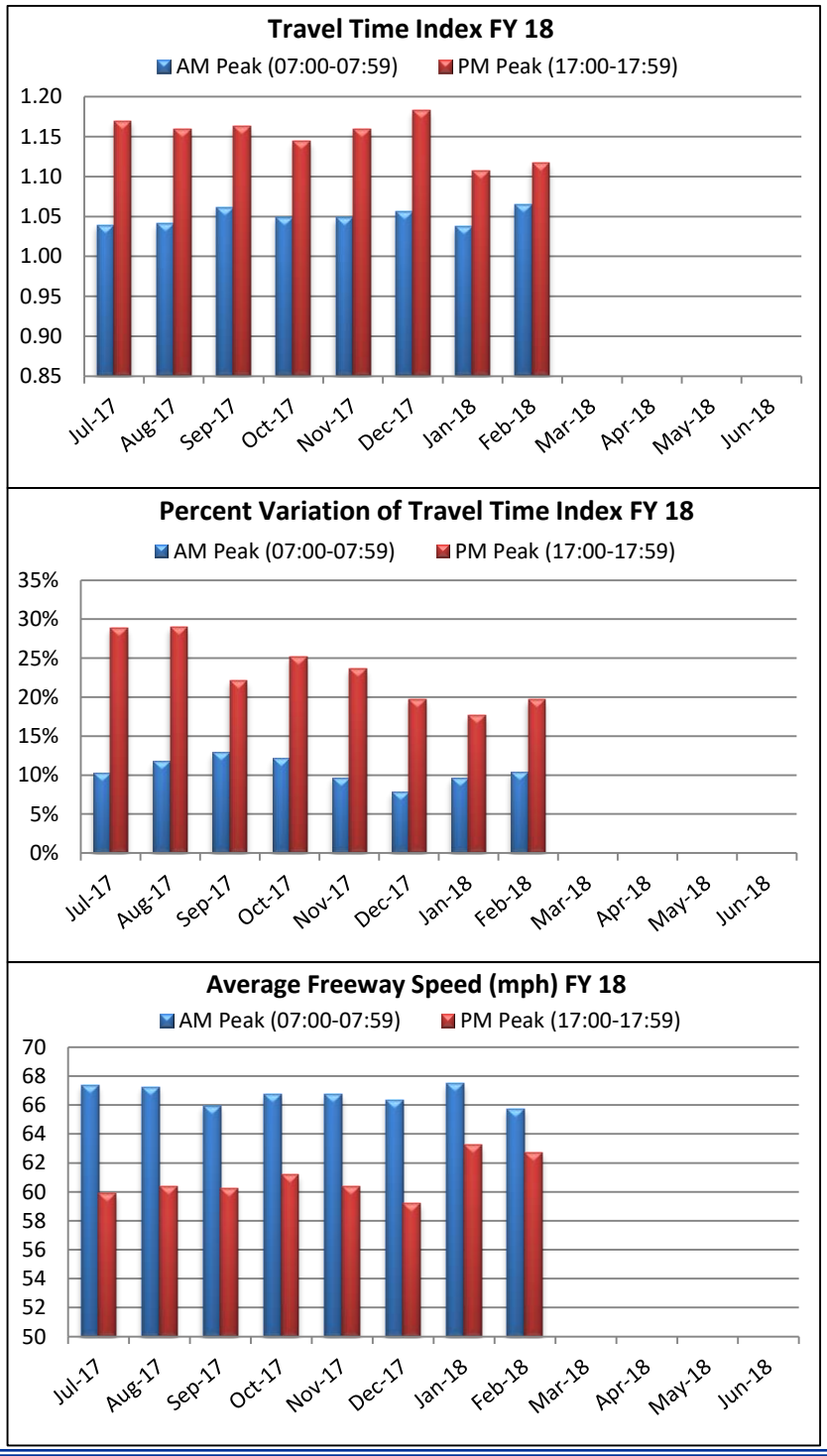
Freeway Traffic Level of Service

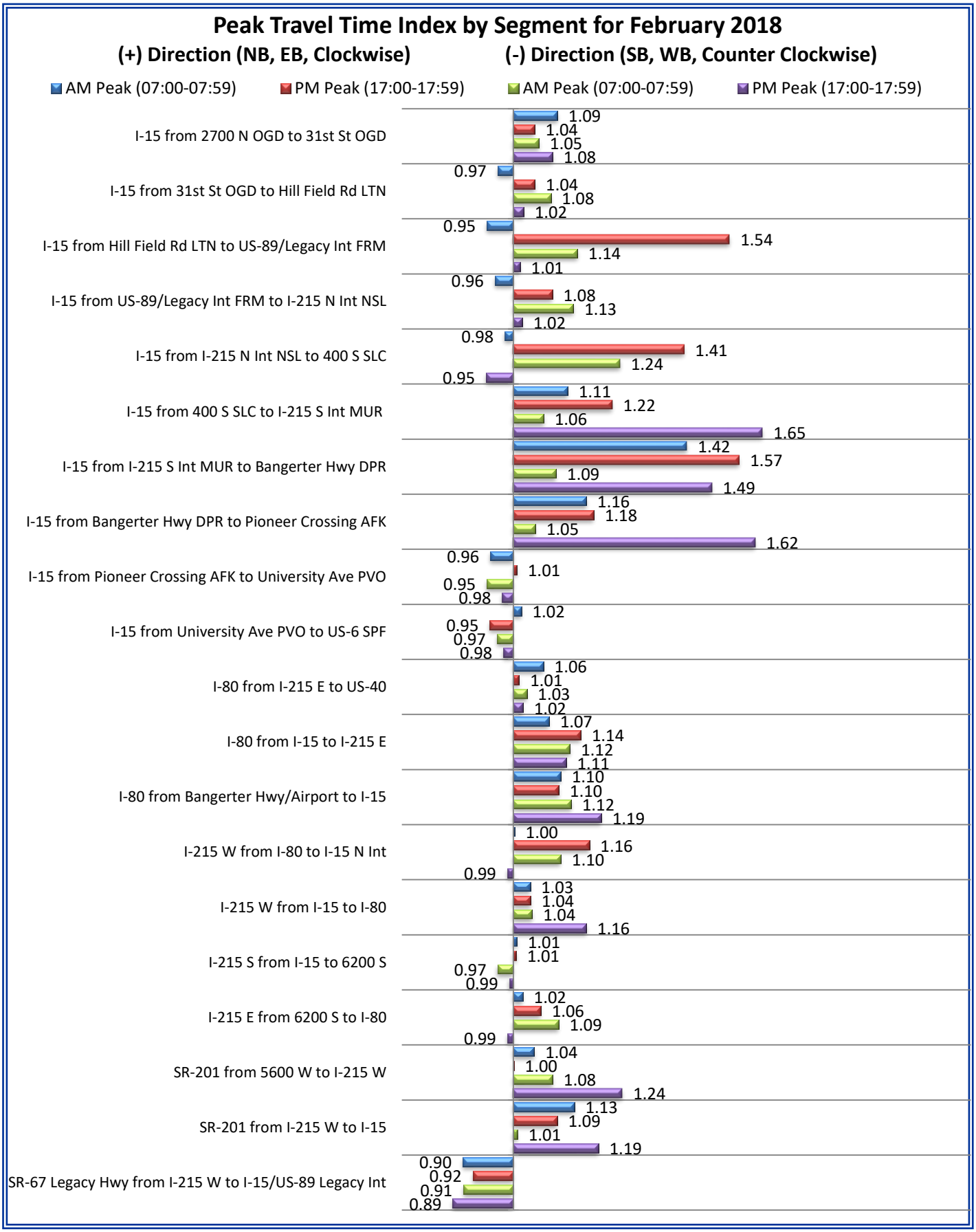
Freeway flow measures are taken from the Traffic Monitoring Stations (TMS) located throughout the Wasatch Front. As more TMS sites are installed throughout the state, they will be included in these performance measures.

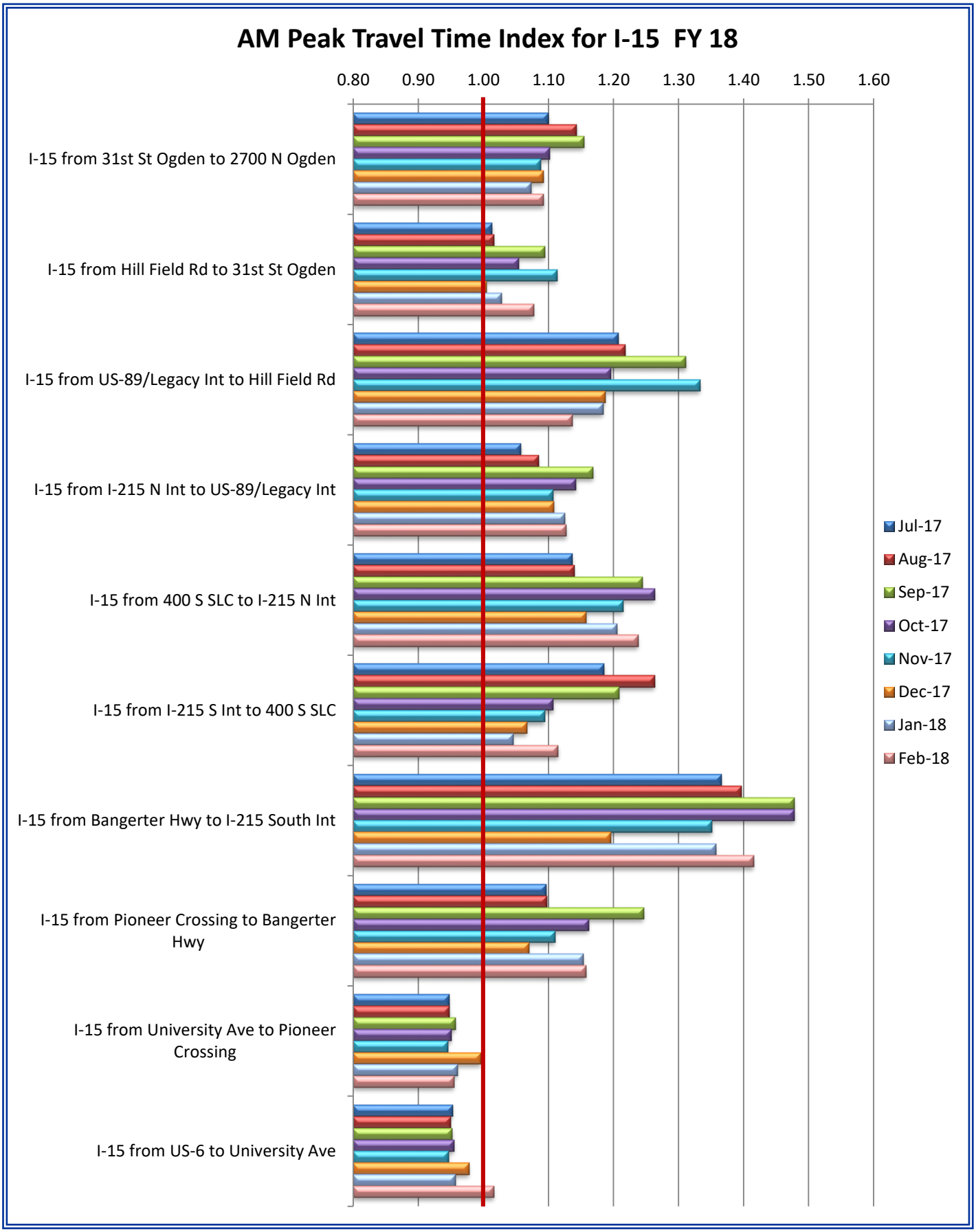
Travel Time Index: This measure of mobility is based on freeway speeds and is weighted by segment lengths and by the traffic volume. A value of 1.0 represents free-flow speeds. A value of 1.12 indicates that the average vehicle trip takes 12% longer than if that were the only vehicle on the freeway.

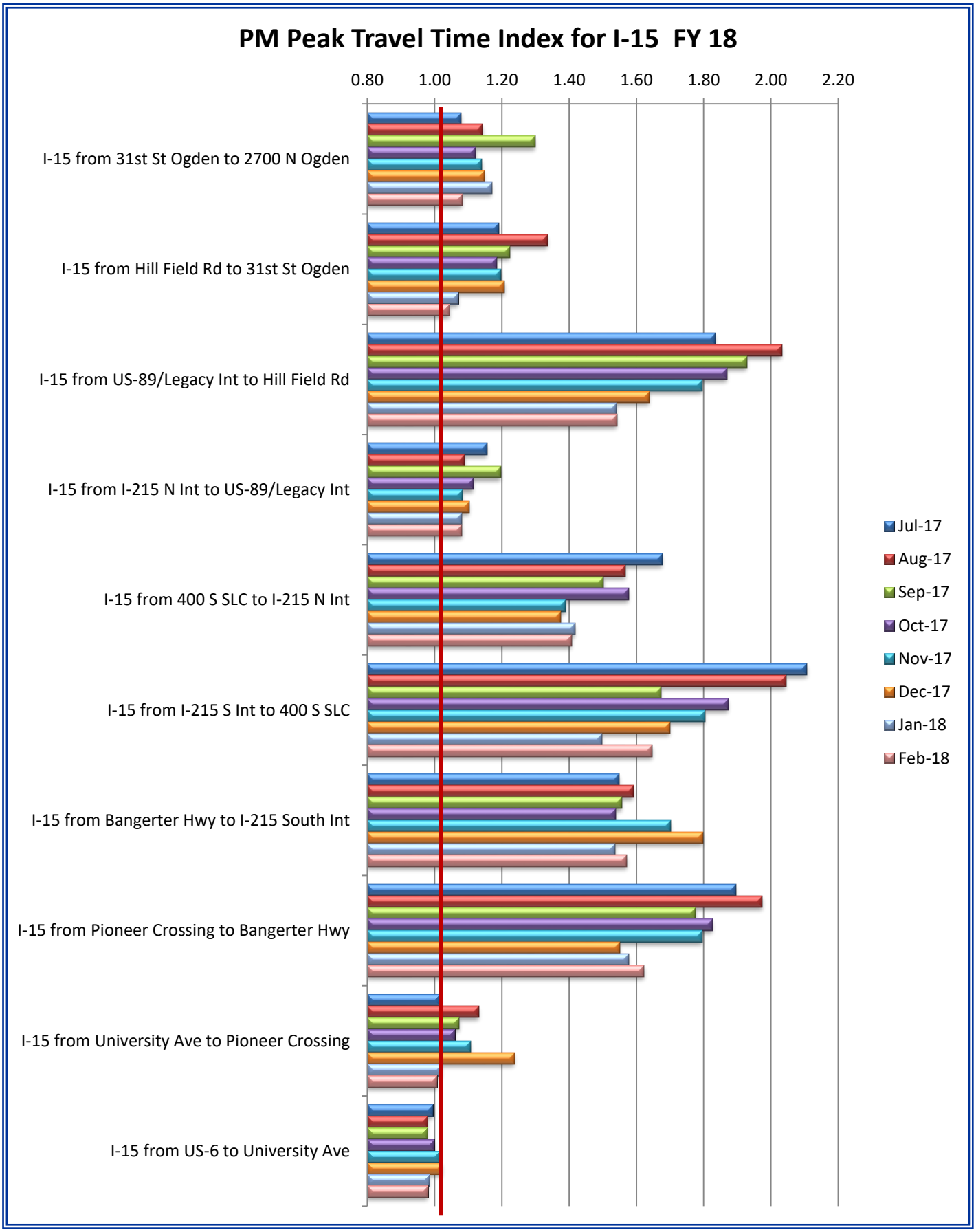
Percent Variation of Travel Time Index: The percent variation in the Travel Time Index is a measure of how much the Travel Time Index changes from day-to-day.

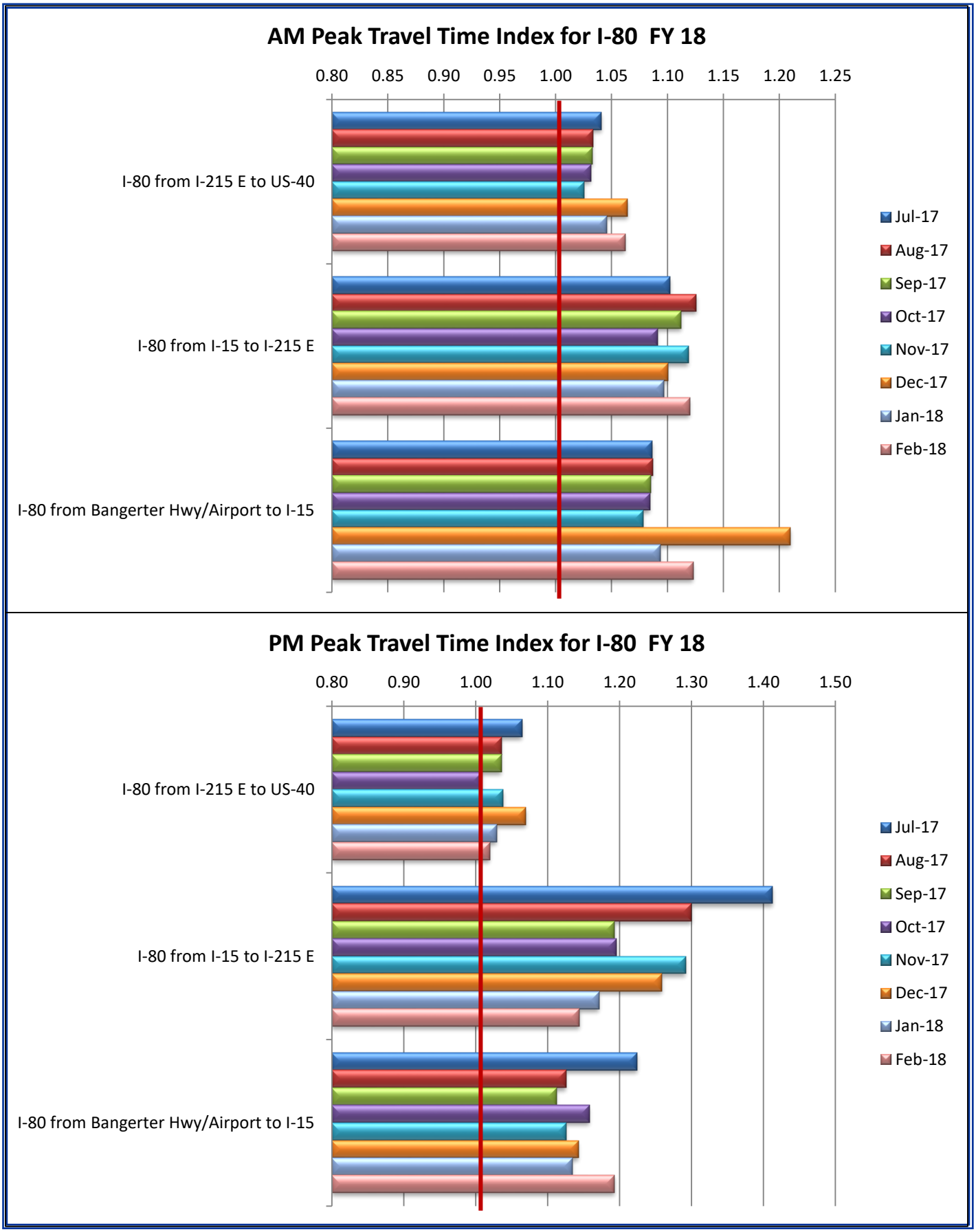
Average Freeway Speed: The freeway speed is weighted by volume.

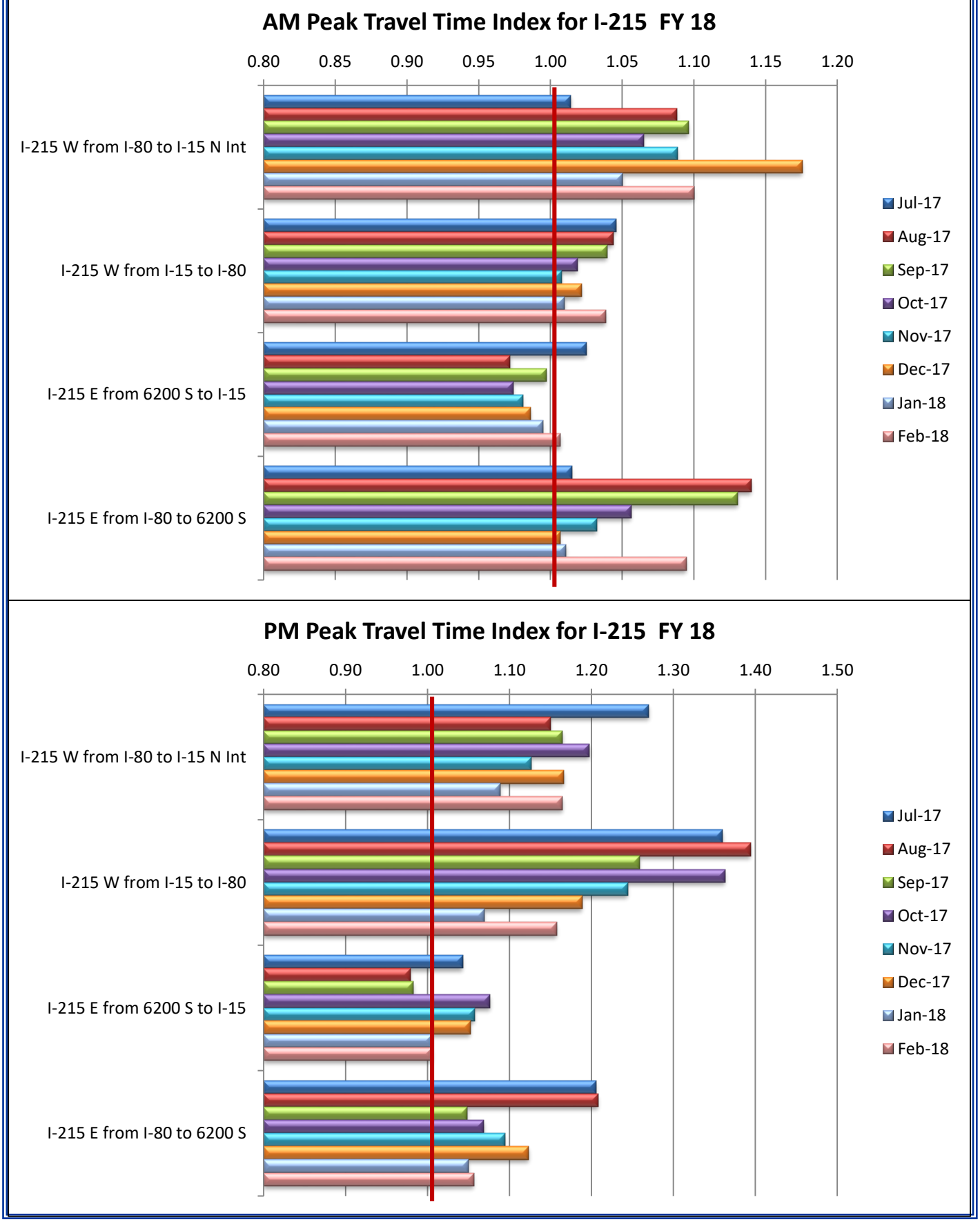


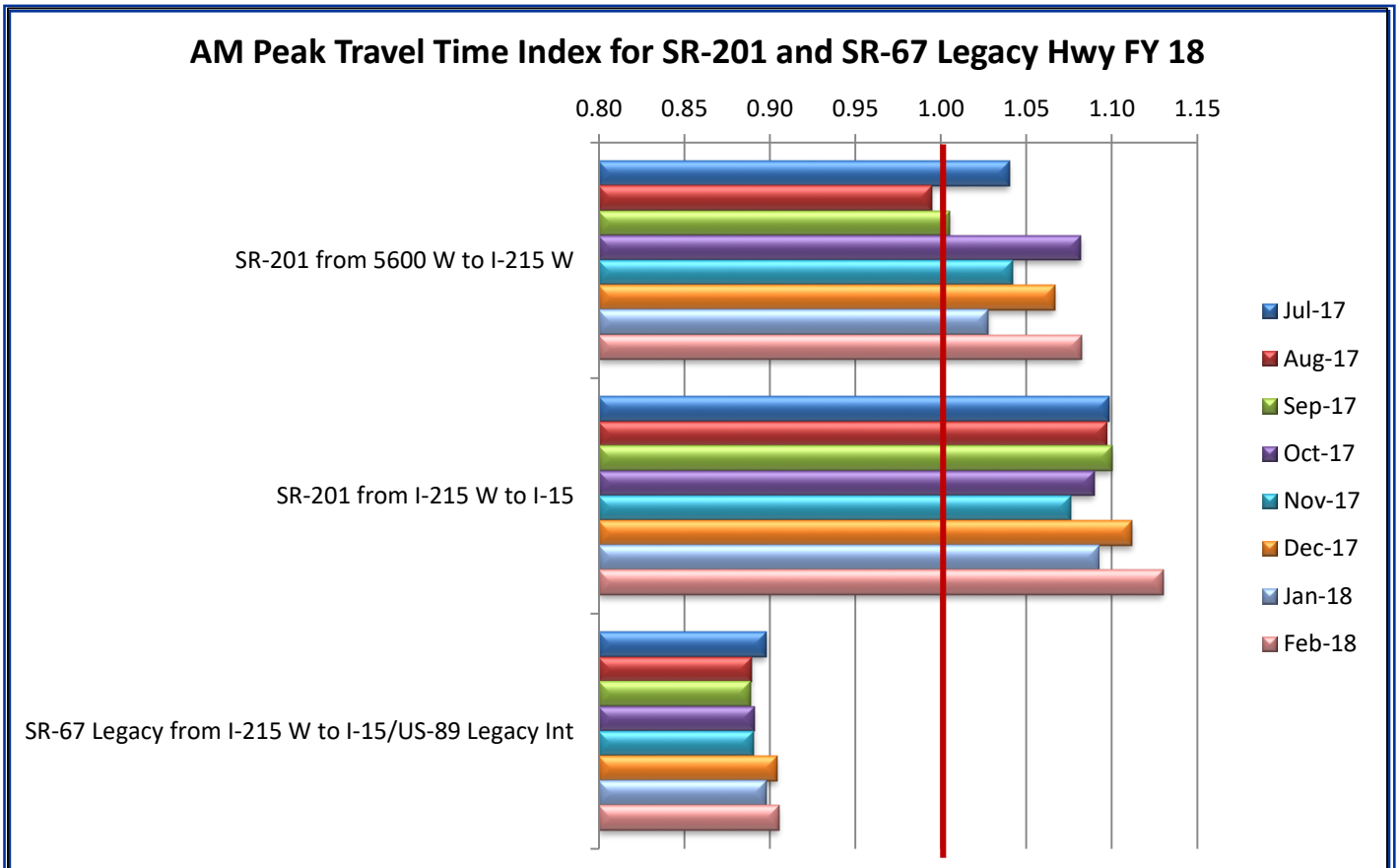

Peak Travel Time Index by Segment for February 2018
(+) Direction (NB, EB, Clockwise)
(-) Direction (SB, WB, Counter Clockwise)
AM Peak (07:00-07:59)
PM Peak (17:00-17:59)
AM Peak (07:00-07:59)
PM Peak (17:00-17:59)
I-15 from 2700 N OGD to 31st St OGD
1.09 1.04 1.05 1.08
I-15 from 31st St OGD to Hill Field Rd LTN
0.97 1.04 1.08 1.02
I-15 from Hill Field Rd LTN to US-89/Legacy Int FRM
0.95 1.54 1.14 1.01
I-15 from US-89/Legacy Int FRM to I-215 N Int NSL
0.96 1.08 1.13 1.02
I-15 from I-215 N Int NSL to 400 S SLC
0.98 1.41 1.24 0.95
I-15 from 400 S SLC to I-215 S Int MUR
1.11 1.22 1.06 1.65
I-15 from I-215 S Int MUR to Bangerter Hwy DPR
1.42 1.57 1.09 1.49
I-15 from Bangerter Hwy DPR to Pioneer Crossing AFK
1.16 1.18 1.05 1.62
I-15 from Pioneer Crossing AFK to University Ave PVO
0.96 1.01 0.95 0.98
I-15 from University Ave PVO to US-6 SPF
1.02 0.95 0.97 0.98
I-80 from I-215 E to US-40
1.06 1.01 1.03 1.02
I-80 from I-15 to I-215 E
1.07 1.14 1.12 1.11
I-80 from Bangerter Hwy/Airport to I-15
1.10 1.10 1.12 1.19
I-215 W from I-80 to I-15 N Int
1.00 1.16 1.10 0.99
I-215 W from I-15 to I-80
1.03 1.04 1.04 1.16
I-215 S from I-15 to 6200 S
1.01 1.01 0.97 0.99
I-215 E from 6200 S to I-80
1.02 1.06 1.09 0.99
SR-201 from 5600 W to I-215 W
1.04 1.00 1.08 1.24
SR-201 from I-215 W to I-15
1.13 1.09 1.01 1.19
SR-67 Legacy Hwy from I-215 W to I-15/US-89 Legacy Int
0.90 0.92 0.91 0.89

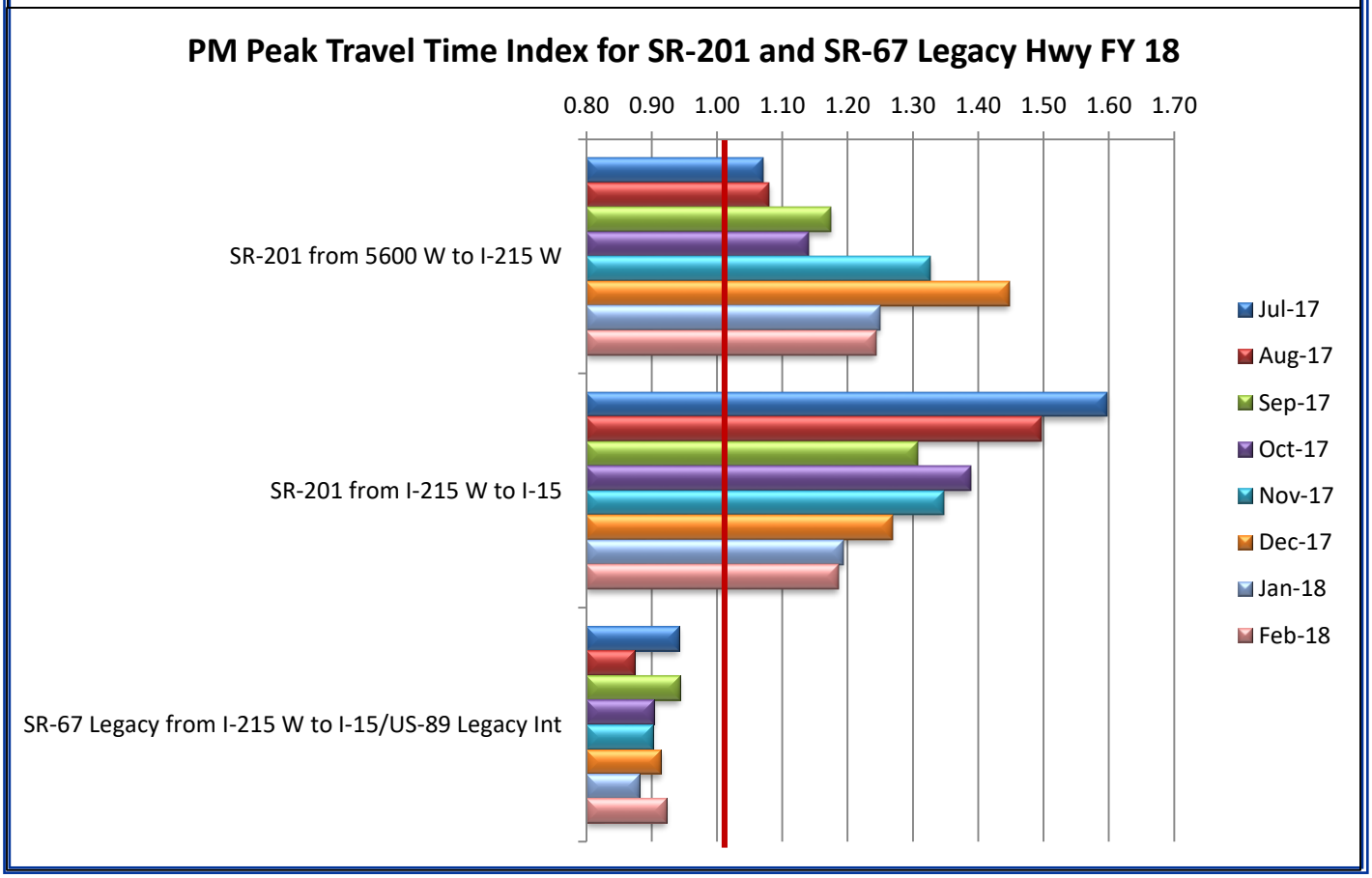

AM Peak Travel Time Index for I-15 FY 18
0.80
0.90
1.00
1.10
1.20
1.30
1.40
1.50
1.60
I-15 from 31st St Ogden to 2700 N Ogden
I-15 from Hill Field Rd to 31st St Ogden
I-15 from US-89/Legacy Int to Hill Field Rd
I-15 from I-215 N Int to US-89/Legacy Int
I-15 from 400 S SLC to I-215 N Int
I-15 from I-215 S Int to 400 S SLC
I-15 from Bangerter Hwy to I-215 South Int
I-15 from Pioneer Crossing to Bangerter Hwy
I-15 from University Ave to Pioneer Crossing
I-15 from US-6 to University Ave
Jul-17
Aug-17
Sep-17
Oct-17
Nov-17
Dec-17
Jan-18
Feb-18


PM Peak Travel Time Index for I-15 FY 18
0.80
1.00
1.20
1.40
1.60
1.80
2.00
2.20
I-15 from 31st St Ogden to 2700 N Ogden
I-15 from Hill Field Rd to 31st St Ogden
I-15 from US-89/Legacy Int to Hill Field Rd
I-15 from I-215 N Int to US-89/Legacy Int
I-15 from 400 S SLC to I-215 N Int
I-15 from I-215 S Int to 400 S SLC
I-15 from Bangerter Hwy to I-215 South Int
I-15 from Pioneer Crossing to Bangerter Hwy
I-15 from University Ave to Pioneer Crossing
I-15 from US-6 to University Ave
Jul-17
Aug-17
Sep-17
Oct-17
Nov-17
Dec-17
Jan-18
Feb-18

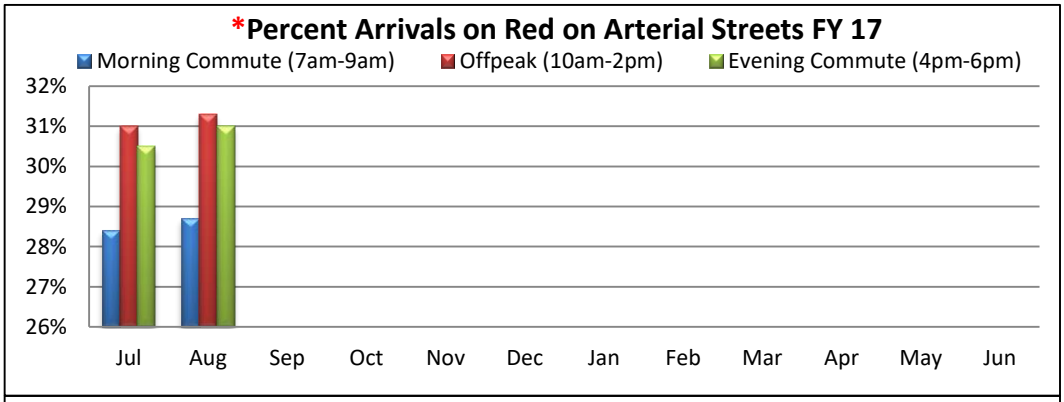

AM Peak Travel Time Index for I-80 FY 18
0.80
0.85
0.90
0.95
1.00
1.05
1.10
1.15
1.20
1.25
I-80 from I-215 E to US-40
I-80 from I-15 to I-215 E
I-80 from Bangerter Hwy/Airport to I-15
Jul-17
Aug-17
Sep-17
Oct-17
Nov-17
Dec-17
Jan-18
Feb-18
PM Peak Travel Time Index for I-80 FY 18
0.80
0.90
1.00
1.10
1.20
1.30
1.40
1.50
I-80 from I-215 E to US-40
I-80 from I-15 to I-215 E
I-80 from Bangerter Hwy/Airport to I-15
Jul-17
Aug-17
Sep-17
Oct-17
Nov-17
Dec-17
Jan-18
Feb-18

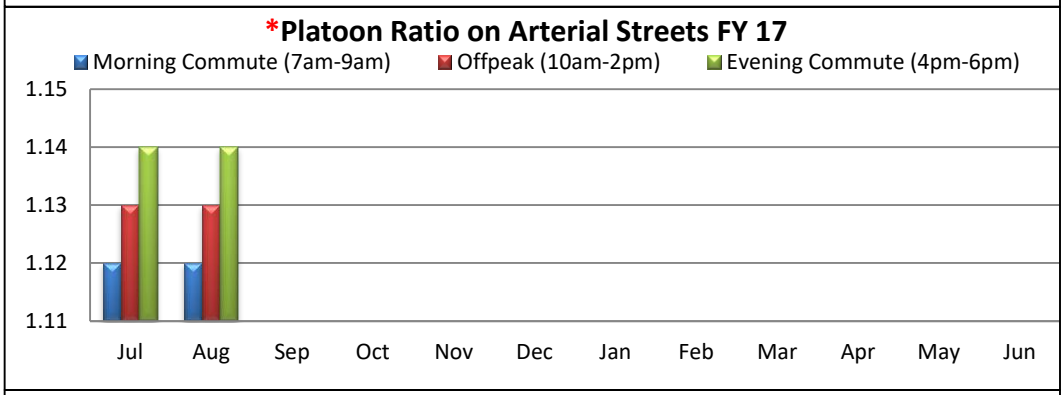

AM Peak Travel Time Index for I-215 FY 18
0.80
0.85
0.90
0.95
1.00
1.05
1.10
1.15
1.20
I-215 W from I-80 to I-15 N Int
I-215 W from I-15 to I-80
I-215 E from 6200 S to I-15
I-215 E from I-80 to 6200 S
Jul-17
Aug-17
Sep-17
Oct-17
Nov-17
Dec-17
Jan-18
Feb-18
PM Peak Travel Time Index for I-215 FY 18
0.80
0.90
1.00
1.10
1.20
1.30
1.40
1.50
I-215 W from I-80 to I-15 N Int
I-215 W from I-15 to I-80
I-215 E from 6200 S to I-15
I-215 E from I-80 to 6200 S
Jul-17
Aug-17
Sep-17
Oct-17
Nov-17
Dec-17
Jan-18
Feb-18

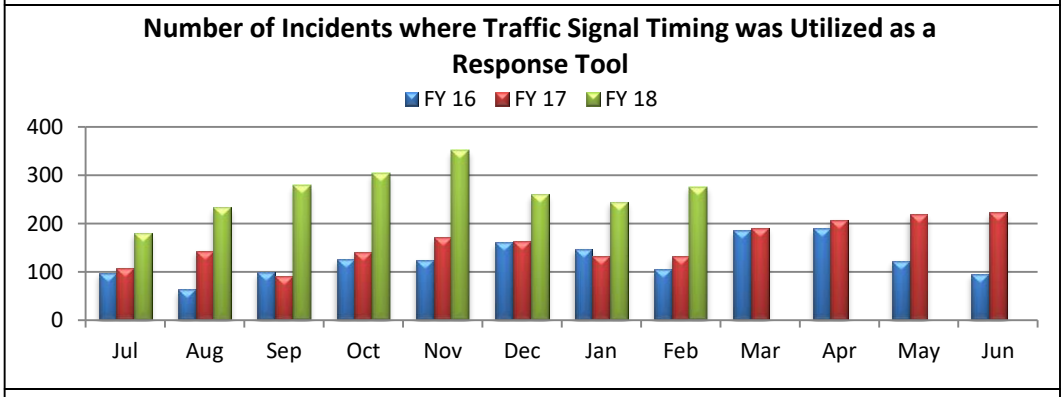

AM Peak Travel Time Index for SR-201 and SR-67 Legacy Hwy FY 18
0.80
0.85
0.90
0.95
1.00
1.05
1.10
1.15
SR-201 from 5600 W to I-215 W
SR-201 from I-215 W to I-15
SR-67 Legacy from I-215 W to I-15/US-89 Legacy Int
Jul-17
Aug-17
Sep-17
Oct-17
Nov-17
Dec-17
Jan-18
Feb-18

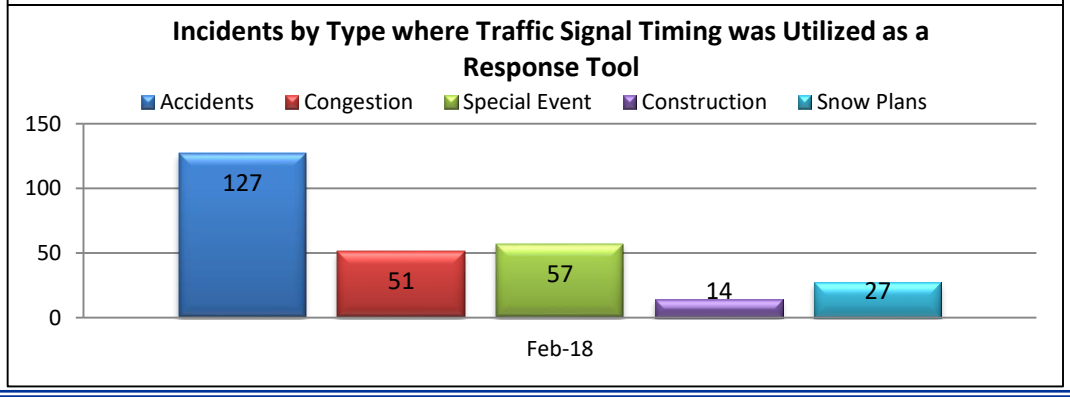

PM Peak Travel Time Index for SR-201 and SR-67 Legacy Hwy FY 18
0.80
0.90
1.00
1.10
1.20
1.30
1.40
1.50
1.60
1.70
SR-201 from 5600 W to I-215 W
SR-201 from I-215 W to I-15
SR-67 Legacy from I-215 W to I-15/US-89 Legacy Int
Jul-17
Aug-17
Sep-17
Oct-17
Nov-17
Dec-17
Jan-18
Feb-18

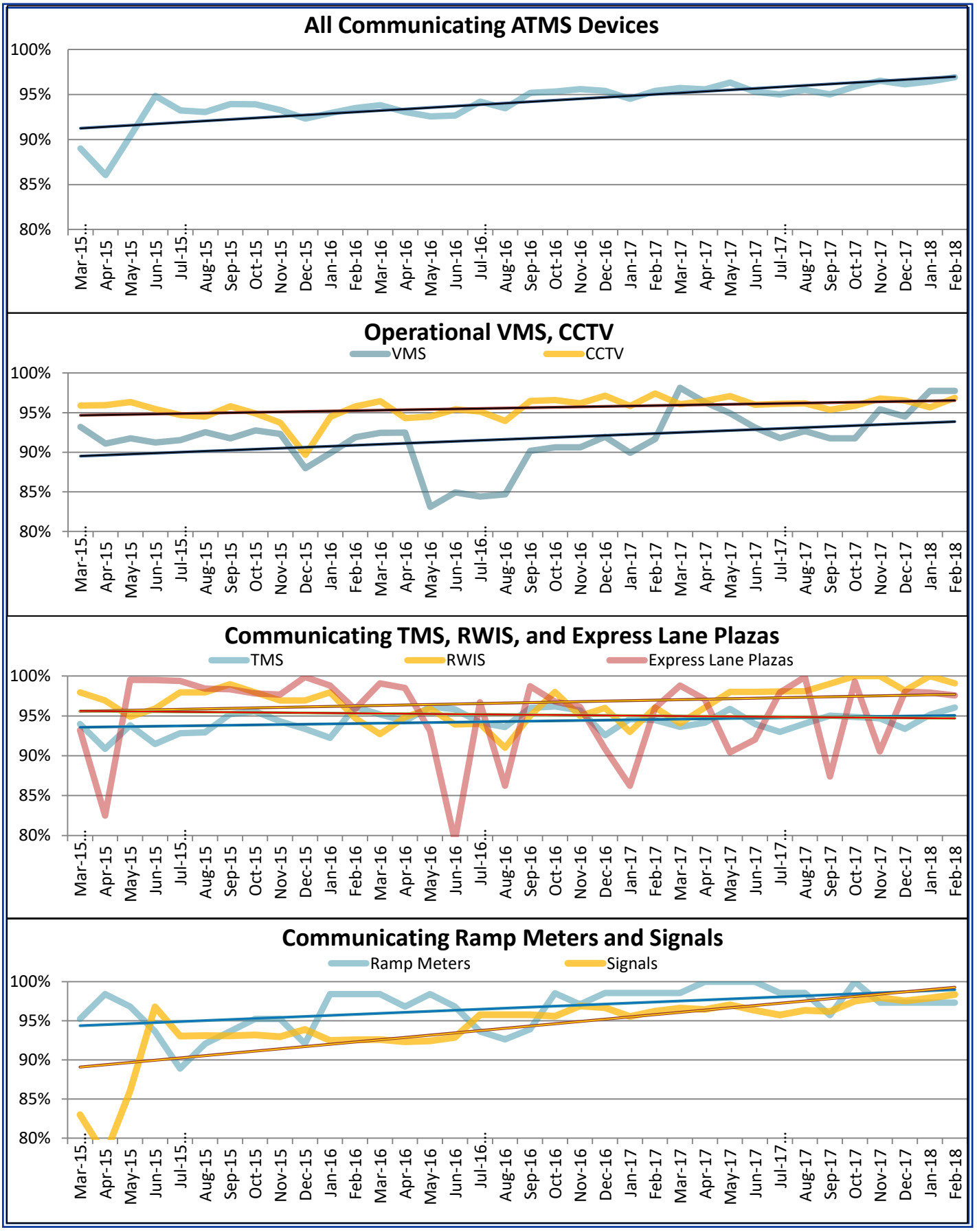
The percent arrival on red along the arterial statistics are generated automatically through the automated traffic signal performance measures, which show real-time and historical functionality at signalized intersections. The system automatically time-stamps when each vehicle arrives at the intersection and then compares the detection time-stamp if the phase was green or red. The percent arrival on red data is averaged over the 24 hours of the day and days in the month. . The lower charts shows the number of incidents where traffic signal timing was modified in order to help traffic flow around closed lanes, or to help relieve excessive congestion.

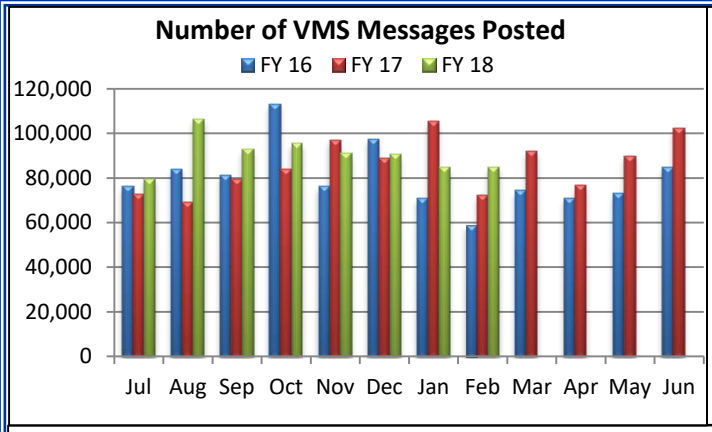


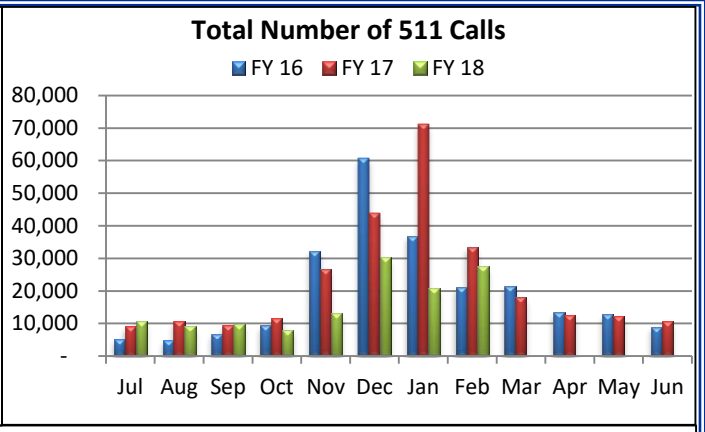


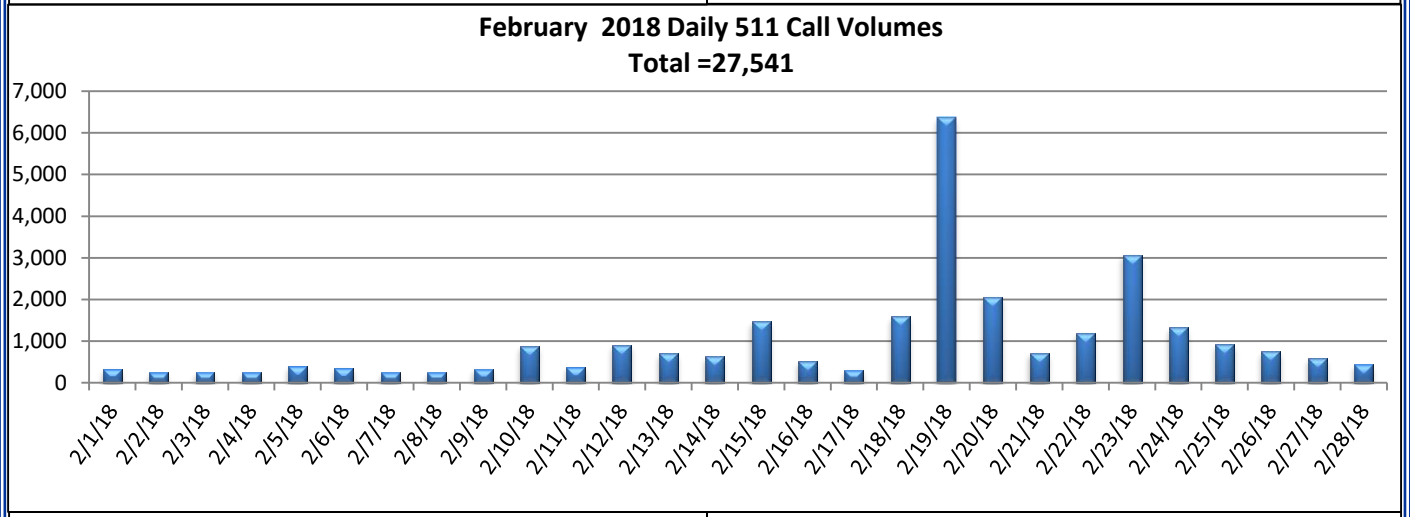





All Communicating ATMS Devices
100%
95%
90%
85%
80%
Mar-15...
Apr-15
May-15
Jun-15
Jul-15...
Aug-15
Sep-15
Oct-15
Nov-15
Dec-15
Jan-16
Feb-16
Mar-16
Apr-16
May-16
Jun-16
Jul-16...
Aug-16
Sep-16
Oct-16
Nov-16
Dec-16
Jan-17
Feb-17
Mar-17
Apr-17
May-17
Jun-17
Jul-17...
Aug-17
Sep-17
Oct-17
Nov-17
Dec-17
Jan-18
Feb-18
Operational VMS, CCTV
VMS
CCTV
Communicating TMS, RWIS, and Express Lane Plazas
TMS
RWIS
Express Lane Plazas
Communicating Ramp Meters and Signals
Ramp Meters
Signals


Number of VMS Messages Posted
FY 16
FY 17
FY 18
120,000
100,000
80,000
60,000
40,000
20,000
0
Jul
Aug
Sep
Oct
Nov
Dec
Jan
Feb
Mar
Apr
May
Jun


Total Number of 511 Calls
FY 16
FY 17
FY 18
80,000
70,000
60,000
50,000
40,000
30,000
20,000
10,000
-
Jul
Aug
Sep
Oct
Nov
Dec
Jan
Feb
Mar
Apr
May
Jun


February 2018 Daily 511 Call Volumes
Total =27,541
7,000
6,000
5,000
4,000
3,000
2,000
1,000
0
2/1/18
2/2/18
2/3/18
2/4/18
2/5/18
2/6/18
2/7/18
2/8/18
2/9/18
2/10/18
2/11/18
2/12/18
2/13/18
2/14/18
2/15/18
2/16/18
2/17/18
2/18/18
2/19/18
2/20/18
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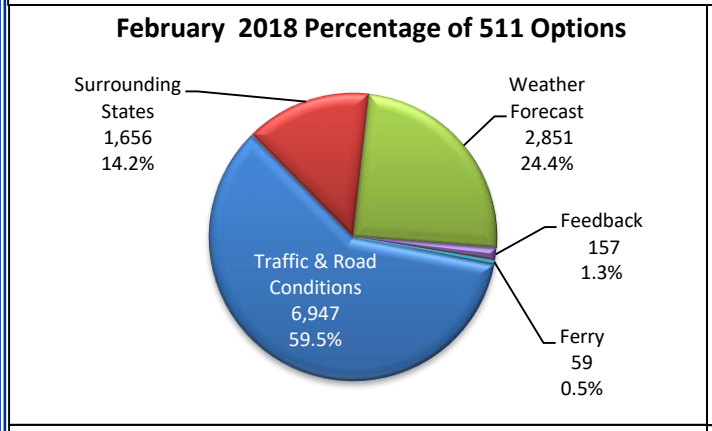
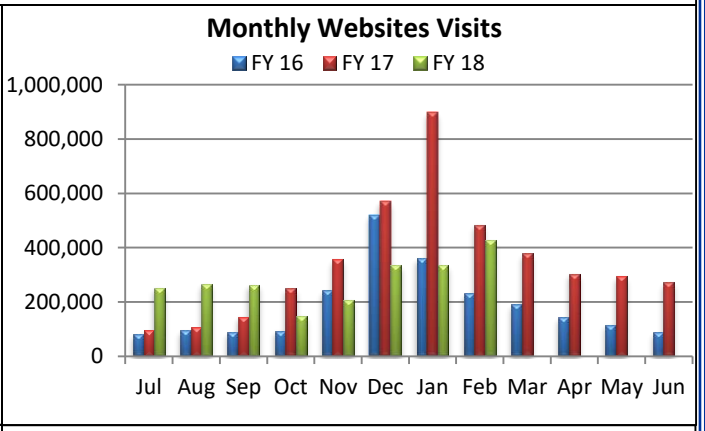
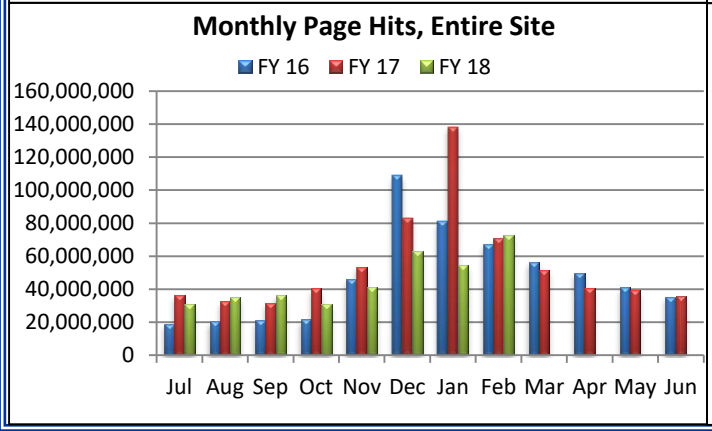
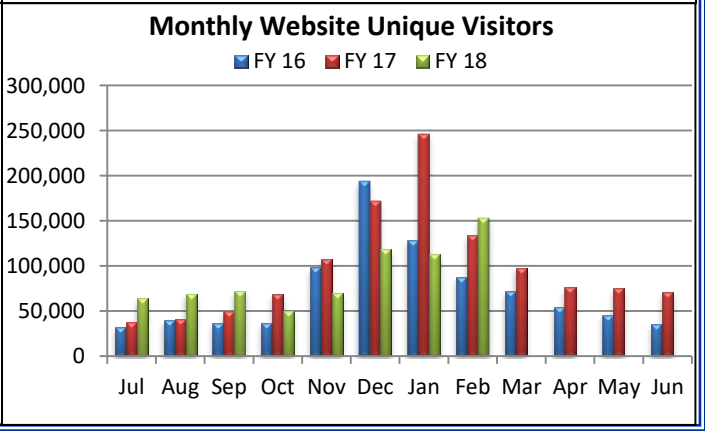
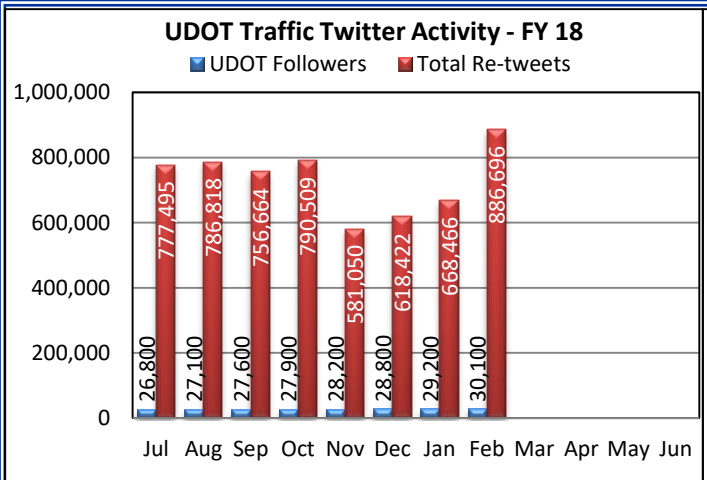
2/24/18
2/25/18
2/26/18
2/27/18
2/28/18

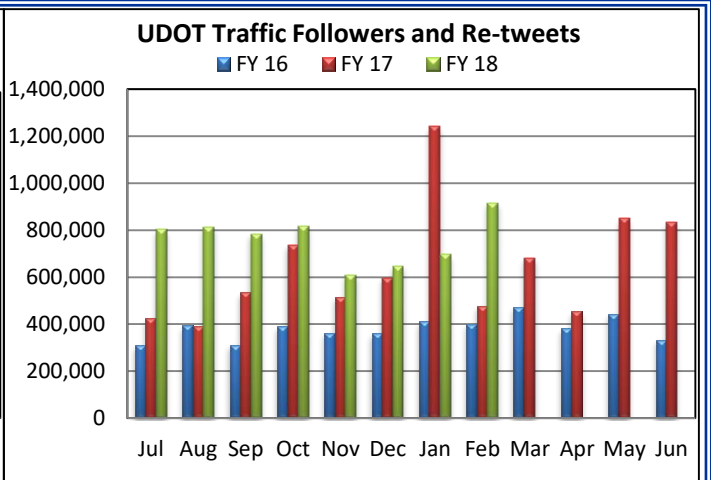

February 2018 Percentage of 511 Options
Surrounding States 1,656 14.2%
Weather Forecast 2,851 24.4%
Feedback 157 1.3%
Ferry 59 0.5%
Traffic & Road Conditions 6,947 59.5%

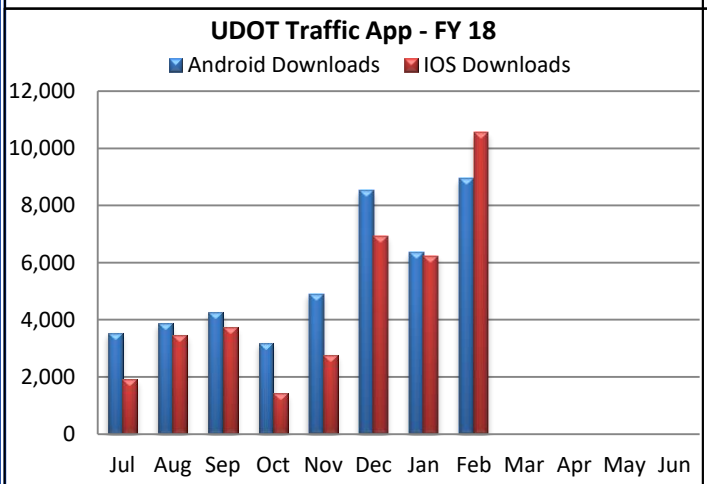

Monthly Websites Visits
FY 16
FY 17
FY 18
1,000,000
800,000
600,000
400,000
200,000
0
Jul
Aug
Sep
Oct
Nov
Dec
Jan
Feb
Mar
Apr
May
Jun

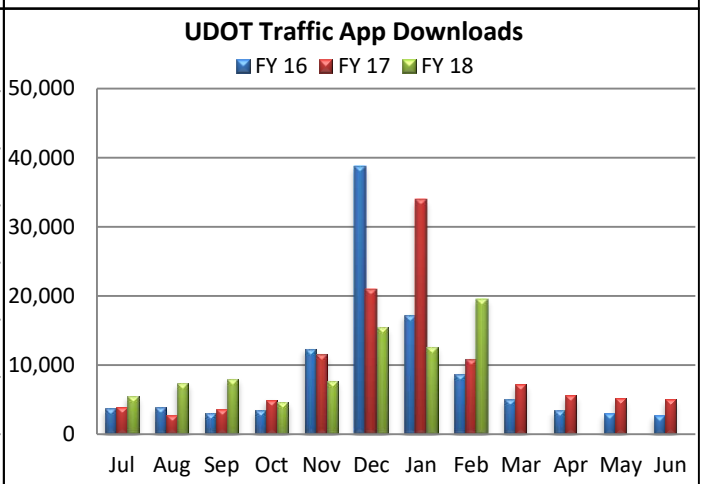

Monthly Page Hits, Entire Site
FY 16
FY 17
FY 18
160,000,000
140,000,000
120,000,000
100,000,000
80,000,000
60,000,000
40,000,000
20,000,000
0
Jul
Aug
Sep
Oct
Nov
Dec
Jan
Feb
Mar
Apr
May
Jun

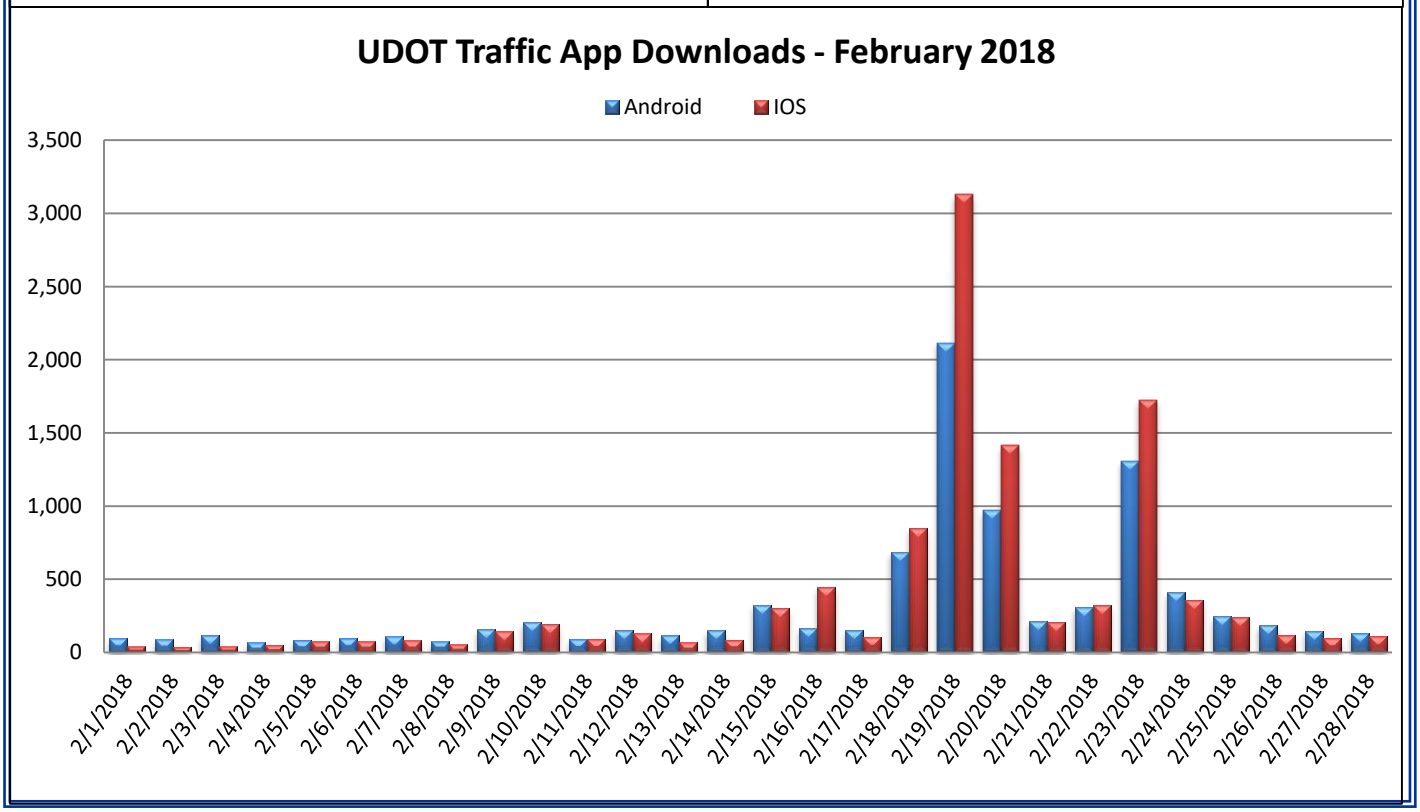

Monthly Website Unique Visitors
FY 16
FY 17
FY 18
300,000
250,000
200,000
150,000
100,000
50,000
0
Jul
Aug
Sep
Oct
Nov
Dec
Jan
Feb
Mar
Apr
May
Jun

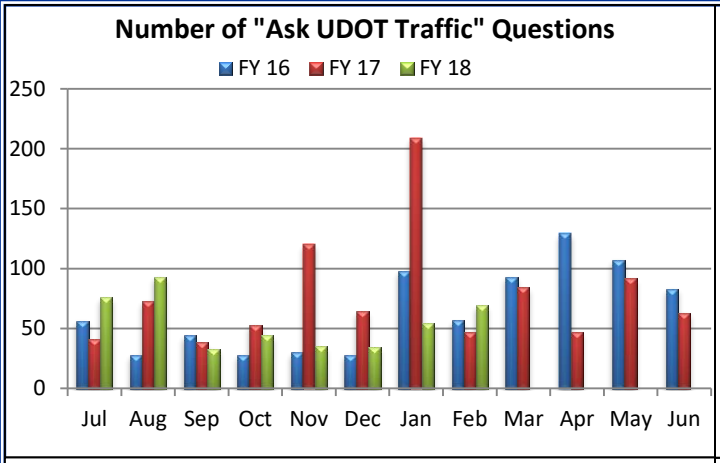

UDOT Traffic Twitter Activity - FY 18
UDOT Followers
Total Re-tweets
1,000,000
800,000
600,000
400,000
200,000
0
26,800
777,495
27,100
786,818
27,600
756,664
27,900
790,509
28,200
581,050
28,800
618,422
29,200
668,466
30,100
886,696
Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr May Jun

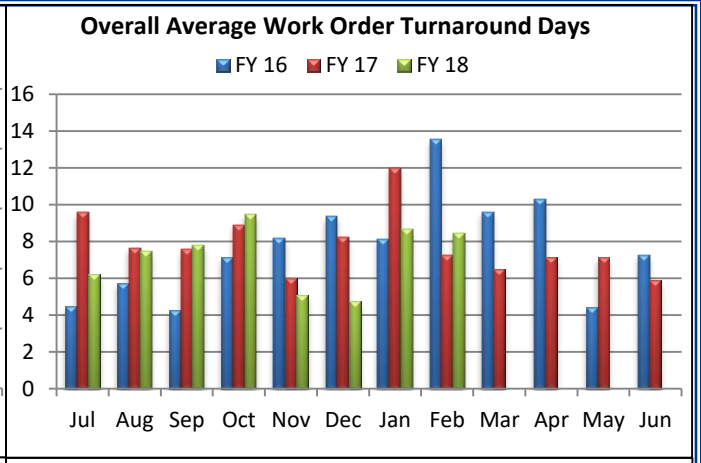

UDOT Traffic Followers and Re-tweets
FY 16
FY 17
FY 18
1,400,000
1,200,000
1,000,000
800,000
600,000
400,000
200,000
0
Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr May Jun

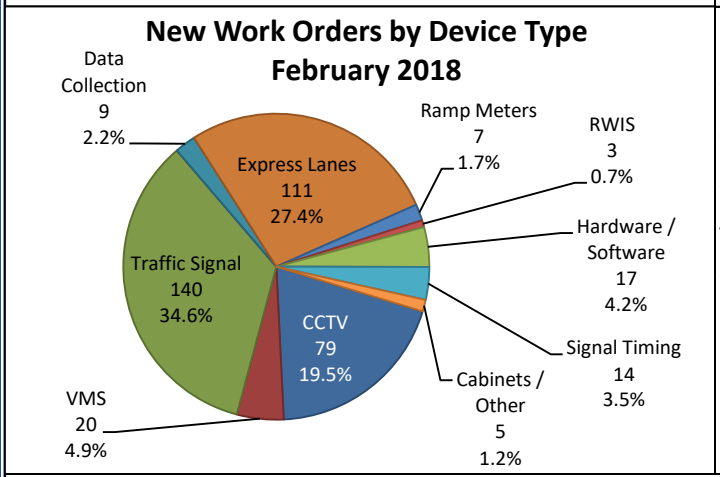

UDOT Traffic App - FY 18
Android Downloads
IOS Downloads
12,000
10,000
8,000
6,000
4,000
2,000
0
Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr May Jun

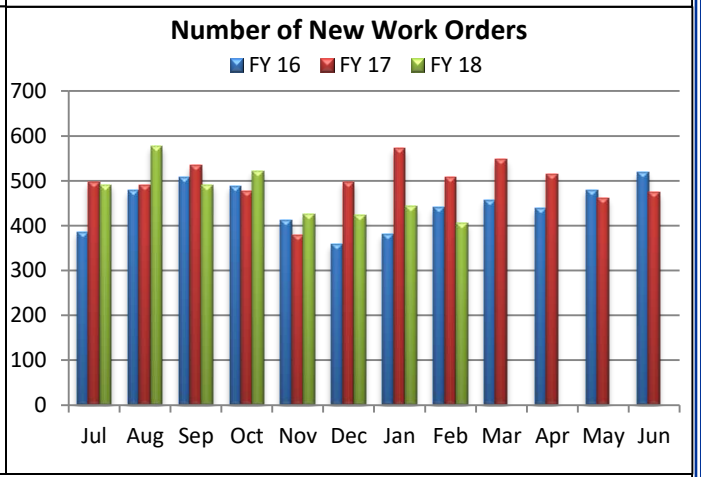

UDOT Traffic App Downloads
FY 16
FY 17
FY 18
50,000
40,000
30,000
20,000
10,000
0
Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr May Jun


UDOT Traffic App Downloads - February 2018
Android
IOS
3,500
3,000
2,500
2,000
1,500
1,000
500
0
2/1/2018 2/2/2018 2/3/2018 2/4/2018 2/5/2018 2/6/2018 2/7/2018 2/8/2018 2/9/2018 2/10/2018 2/11/2018 2/12/2018 2/13/2018 2/14/2018 2/15/2018 2/16/2018 2/17/2018 2/18/2018 2/19/2018 2/20/2018 2/21/2018 2/22/2018 2/23/2018 2/24/2018 2/25/2018 2/26/2018 2/27/2018 2/28/2018

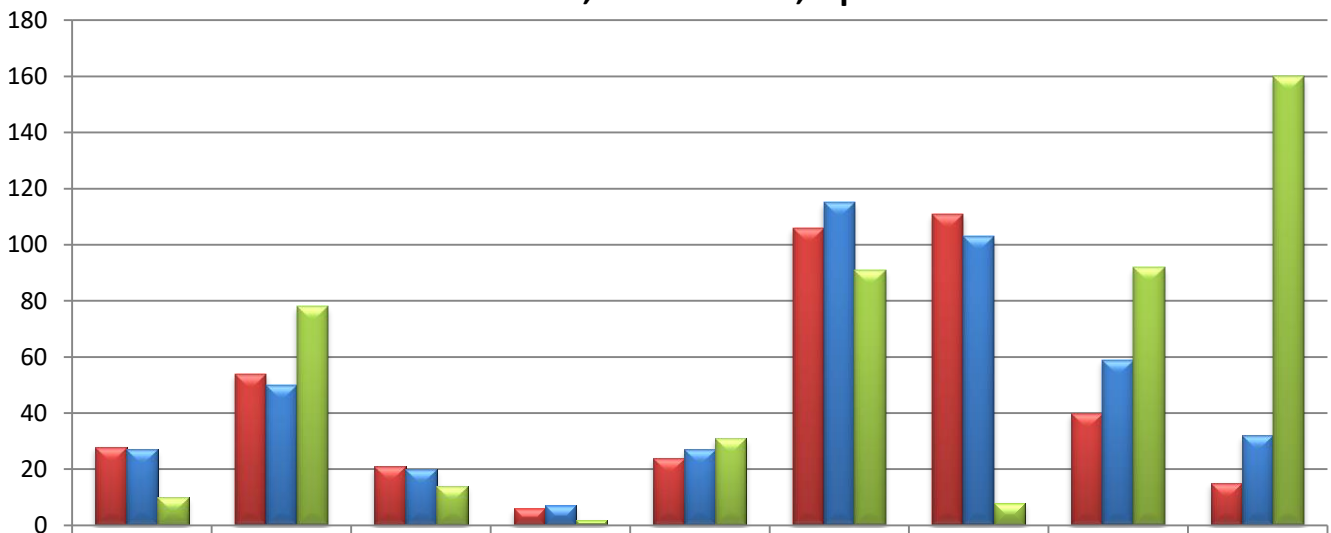








Work Order Statistics by Group - February 2018
Total New = 405, Closed = 440, Open = 486



	R1 Signal Maintenance	R2 Signal Maintenance	R3 Signal Maintenance	R4 Signal Maintenance	Signal Timing	ATMS	Express Lanes	ISS	Other / Engineering / Contractor
New	28	54	21	6	24	106	111	40	15
Closed	27	50	20	7	27	115	103	59	32
Open	10	78	14	2	31	91	8	92	160

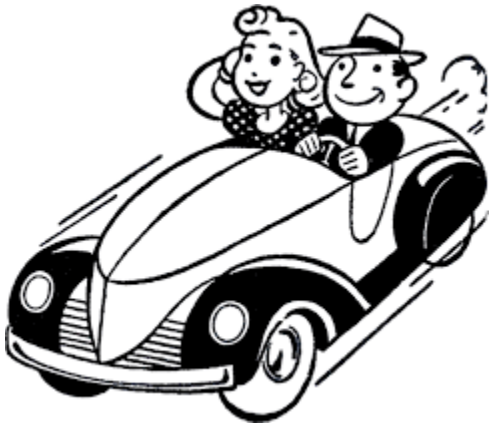
CONTROL ROOM

In February there were 1465 incidents managed, 488 Jpages sent, 909 calls received, and 684 outgoing calls made.

- The Control Room helped manage two significant TOCL events.
- Lent support to the Jon Huntsman funeral, planning for the Jordan River Temple open house, Zero Fatality messaging campaign, and the President's Day winter storm messaging and planning.
- Assisted with a youth group tour of the TOC on the 27th.

TRAVELER INFORMATION

- Attended and assisted with a national peer exchange SPaT workshop.
- Assisted and conducted media interviews for Connected/Autonomous Vehicles (CAV).
- Conducted media interviews for storm related traffic issues.
- Hosted TOC tour for FHWA leadership.
- Facilitated CAV brainstorm sessions.
- Presented at the UDOT Communications Brown Bag luncheon.
- Attended ESF 1 training.



UDOT WEATHER GROUP

Weather Group Statistics

- 616 – Overall UDOT Weather Interactions
- 96 – Outgoing Weather Alerts
- 15 – NWS collaborations
- 12 – Road Weather Alerts

Climatology

In terms of snowfall, February was the most active month of the winter. Two events in the week of President's Day caused a significant impact to many Utah roads. That said, with the exception of parts of central Utah, northern and southern Utah experienced below average precipitation. Overall, statewide temperatures were close to normal, with the exception of the Uinta Basin which was well above normal with minimal snow cover.

Salt Lake International Airport observed 14.3" of snow (normal = 10.7"), 1.06" of precipitation (normal = 1.25"), and was 4.4 degrees above normal (normal mean = 34.2 degrees).

Roosevelt observed 0.1" of snow (normal = 3.6"), 0.33" of precipitation (normal = 0.37"), and was 5.9 degrees above normal (normal mean = 24.8 degrees).

For the winter, the entire state experienced above normal temperatures and with the exception of a few spots in the west desert and central Utah, most of the state experienced below average precipitation. As of February 28, the entire state had below normal snowpack. The best drainage basin was the Northeastern Uintahs at 81% of normal and the worst was the Escalante River at 41% of normal.

By mean temperature, it was the 5th warmest winter on record at the Salt Lake International Airport. Prior to the large storm in the middle of January, snowfall at the airport was at about 38% of normal. At the end of February, the airport was at 86% of normal.

For the current monthly climate outlook, please visit:

http://www.nw-weathernet.com/UDOTMonthlyOutlook.pdf

For the current seasonal outlook, please visit:

http://www.nw-weathernet.com/UDOTSeasonalOutlook.pdf

Weather Operations

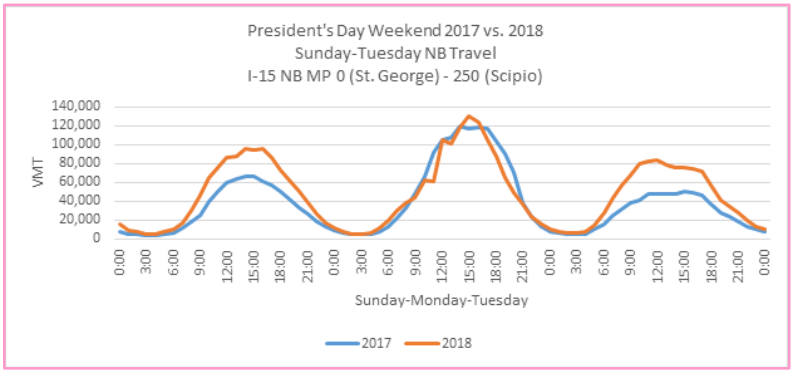
Jeff Williams was chosen by AASHTO Snow and Ice Pooled Fund Cooperative Program (SICOP) to perform a winter maintenance podcast, discussing top things winter maintenance programs should consider. The podcast is expected to be posted in March.

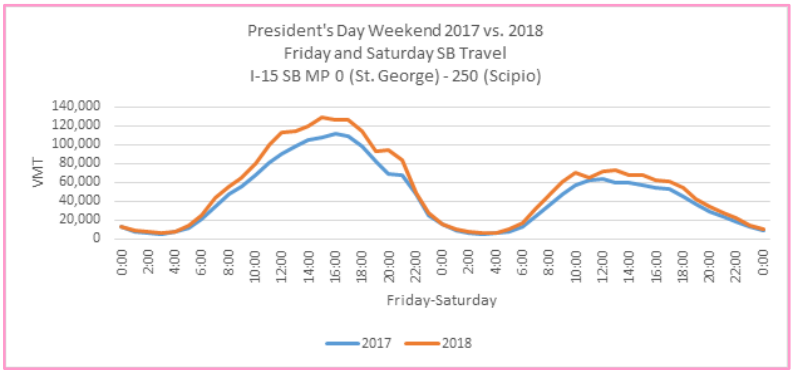
The Weather Operations Team finalized plans and put out a procurement contract for a bid to install six new RWIS foundations across the state. The contract is expected to be awarded in March. The sites are expected to come fully online this summer.

In coordination with UDOT Communications, the second and third Weather Brief videos were produced for two storms in February.

There were two tours of the Weather Operations room, one by members of the FHWA and a friend of Michael Adams.

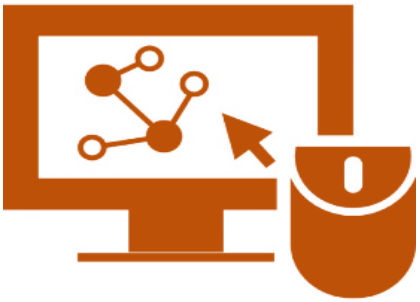
Lastly, a snow storm occurred over President's Day weekend, from Sunday night through Tuesday morning. On the Friday before, the National Weather Service and the Weather Operations group put out consistent messaging for a the storm, including pre-event VMS messages. The Weather Operations group was interested in the impact this messaging had on the travelling public. It was found that there were as many as 56% more vehicles on Sunday and 93% more vehicles heading north on I-15, compared to last year's traffic. The graphs below show the VMT over the weekend compared to last year.





Traffic Operations, Analysis & Reporting

- I-84 & US-89 Interchange VISSIM Model for Region 1.
- US-89 Traffic Operations Support for Region 2.
- Account requests for probe data and freeway PeMS.
- Support of Occurrence Data.
- HERE Probe Data Integration .
- VSL support.
- VSL Automation support.
- Access Management Report for Legislative Services.
- Kickoff for Traffic Analysis Guidelines.
- Wrong Way Drivers & Occurrence Data.
- Connected Vehicles on Redwood Rd.
- Speed compliance in small towns.
- Algorithms for detector quality checks
- Technology Type in C2C
- 14600 South Redwood VISSIM review for Region 2.
- PTV Vistro Software review.
- Executive Dashboard Development.
- Express Lane model review and project support.
- Engineer Retreat presentations.
- SR-36 Vissim analysis for Region 2.
- Top 30 congested corridors for Region 2.
- I-15 Traffic Study project management.
- Little Cottonwood Canyon Bluetooth support.
- President's Day Traffic & Closures Analysis.
- Region 3 support - PG Blvd & interchange connections.
- User Cost analysis.
- Performance Based traffic control support.
- Senior leader congestion report using HERE data.



Traffic Signal Operations

Region 2

- New signal completed and turned on at SR-138 & Stansbury Parkway in Tooele County.
- Right-turn signals relocated from median to far side of intersection to prevent knock-downs at 12300 S & I-15 NB in Draper.
- A semi-exclusive pedestrian phase was added at 11400 S & 3600 W to address some pedestrian safety concerns.

Region 3

- Turned on a new traffic signal at SR-51 & Expressway Lane in Spanish Fork.
- Rebuilt the traffic signal at University Pkwy. & University Ave. in Provo for the BRT project.
- Connected fiber communications to the traffic signal at State St. & 300 E. in American Fork.
- Connected fiber communications to the traffic signal at SR-77 & 1200 W. in Springville.
- Replaced the RRFB at the Center St. SPUI in Orem after it was damaged in a crash.
- Replaced a power service pedestal at 4200 N. & University Ave. in Provo after it was damaged in a crash.
- Replaced a ped pole at US-89 & 700 E. in Provo after it was damaged in a crash.
- Replaced damaged loops at University Pkwy. & State St. in Orem with Matrix radar detection.
- Installed Advance radar detection at two HAWK signals in American Fork and Cedar Hills.
- Installed FYA left turn phasing WB at Main St. & State St. in Pleasant Grove.
- Rewired the intersection of 400 S. & Geneva Rd. in Orem with all new 7-conductors.
- Added an EB right turn overlap head at SR-77 & 1750 W. in Springville.
- Continued timing support for traffic signals through the BRT project.
- Hired a new Region 3 Signal Lead.

Region 4

- The Moab traffic signal adaptive system was updated to resolve some "bugs" with the new firmware.
- Installed EB left turn phasing and replaced video detection with Matrix radar detection at 1300 S. & Main St. in Richfield.
- Replaced all old style ped heads with new clamshell heads at 300 N. & Main St. in Richfield.
- Connected fiber communications to three traffic signals in Moab.
- Connected fiber communications to the traffic signals in Wellington & Monticello.
- Added pedestrian phase at SR-55 & US-6 in Price.

ATMS Maintenance

Field Group

- Completed seven LFOTs for CCTVs.
- Repaired a VMS cabinet damaged by a snowplow by retrofitting the existing cement pad to work with a 334 cabinet. Remounted all the hardware and re-wired the power circuits and fiber-optics.
- Modified driver feedback signs along US-150 to eliminate a receptacle plug-in. Rewired and added a DIN rail mounted AC circuit breaker. Programmed and modified the direction of the sign to get the best speeds.
- Removed an outdated ATMS field equipment trailer used for highway advisory radio broadcasting for remote locations. The trailer was redesigned, rebuilt and converted to a solar powered UPS system. The trailer can now be deployed anywhere to give temporary commercial power to run devices until commercial power can be restored.
- The existing problem with the backup battery in the Daktronics controllers has been resolved by placing an external battery outside of the controller with quick release connections. It is now possible to see the date of the battery which can be included in the maintenance plan.
- There was a total of 85 work orders closed for the month of February.

Lab Group

- Inclusive of Digi terminal servers, traffic signal controllers, 2070 controllers, wireless radio, Wavetronix radar and CCTVs, a total of 57 devices were tested/repaired.
- Three traffic signal cabinets were setup, programmed, burned in, and disbursed to the contractor for three locations on SR-151.
- One cabinet was setup, programmed, burned in, and disbursed to the contractor for SR-85 @ 13200 S.
- Cleaned 14 VSLs on I-80 and performed four LFOTs on TMS sites on Mountain View Corridor.
- Support was provided to the Express Lanes Group with a system drive and a laser installation.
- Installed a radio and Digi onto a portable trailer to gather TMS data on I-80 for Region 2.
- There are 33 open work orders, 18 of which are on hold for loop replacements.
- The Electronics Lab closed eight work orders during the month of February

ATMS Maintenance

Express Lanes Group

- Repaired six, replaced 12, programmed 20, upgraded and rebooted eight, and restarted services on four lane controllers.
- Rebooted one and upgraded four lasers.
- Replaced one reader and rebooted two.
- PMs were performed on twelve cabinets, and five lanes.
- Replaced four UPS batteries and rebooted four inverters.
- Rebooted four VTMS.
- Installed seven relays.

- The Express Lanes team received assistance from all the maintenance groups and multiple other people.
- There was a total of 148 work orders, and 103 fixed item work orders closed in the month of February.

Region Projects

STATEWIDE PROJECT

- **16254 – Statewide Maintenance Shed Connectivity:** Design underway to connect fiber to: R2 Aviation Shed; R2 Grantsville Shed; R2 Murray Complex (Maint shed, Sign and Paint Shed, UHP Headquarters); R2 SL Metro East Shed; R2 West Jordan Shed; SL South Valley Shed; R3 Provo/Orem Shed.

Region 1

- **Statewide Signal Interconnect (12631):** Substantial completion has been met. Integration continues. Approximately 30 signals remain and all of Region 1 will be connected.
- **SR-37; 5100 W. to SR-108 (13037):** Mitigating CCTV issue at 4000 S. and 3500 W. Contractor needs to move camera.
- **I-215 Redwood North (12674):** SFM ordered. Shelby has picked-up SFM.
- **Sardine Canyon US-89 from Brigham to Wellsville (13744):** Americom Tech and Skyline Electric is the sub. Construction has been placed on hold until spring. Construction to resume soon. Mantua Exit CCTV access has been mitigated.

Region 1

- **I-15; Farr West to Brigham (10491):** Traffic Monitoring Station (TMS) improvements and VMS installation. The 30 day testing is complete.
- **SR-97 (5500 South) & 4300 West (15446):** In design.
- **SR-108 and 1475 W. (14803):** In design. Will need CDMA connection.
- **SR-126 and 6000 S. (15800):** In design.
- **SR-126 and 4800 S. (15801):** In design.
- **5 VMS Region 1 (16041):** In design. PIH has been completed. ATMS and Fiber comments have been passed along to the project team.

Region 2

- **I-80 Parley's Canyon – Variable Speed Limit Automation:** This winter, we have been developing an algorithm to automate the Variable Speed Limit on I-80. Currently there are only two zones in each direction. Each zone spans several miles, but the conditions change and speeds change much more so within those miles. The automation approach will allow us have seven to eight zones in each direction. The Engineer is not able to monitor and change so many speed adjustments over that many zones. A machine algorithm can process and analyze hundreds of speed samples at one time, then adjust the speed to each sign based on the averages of those traveling that zone. This will allow us to be more responsive to the continuous changes throughout the entire corridor. We are anticipating having this ready for the 2018-19 winter season.
- **Mountain View Corridor – 4100 S to California Ave.:** The next phase of the Mountain View Corridor Project is being scoped for the next design-build phase. This new section is anticipated to start becoming a freeway cross-section. ATMS Fiber/Conduit and devices are being planned in this section.
- **I-15 Southbound Lane Gain:** The Design-Build Team has begun preparing for adding a lane on Southbound I-15 from SR-201 to 12300 South. There will be three Variable Message Signs replaced with new signs as well as several cameras and traffic monitoring stations. This project will allow us to optimize the locations and to enhance maintenance access.
- **Midvalley Highway – Tooele County:** Scoping is on-going to refine the location of ATMS devices. There will be a shoulder VMS just west of the new SR-138 intersection and two cameras at each end of the highway. There will also be TMSs at the I-80 interchange.

Region 3

- **American Fork Canyon ATMS:** Region 3 is working with the Forest Service, the National Park, American Fork City, and Utah County to place conduit and fiber up American Fork Canyon. A waterline project will install the conduit and fiber from the mouth of the canyon to just before Timpanogos Cave. Environmental work must be completed to determine timeline. Maintenance paving project has been moved to 2020 in coordination with possible fiber project up to Tibble Fork.
- **PIN 15573 US-191 Guardrail Replacement:** Project in Design. Coordinating with project to ensure they do not impact fiber placement by Strata.
- **PIN 10265 – SR-198; Woodland Hills Dr to Arrowhead Trail in SF:** Project Advertising. This project will add fiber along this stretch and connect to existing signals.
- **PIN 11897 – US-89; Center St to Bulldog Blvd in Provo:** NO CHANGE Project in Design. This project will replace the existing fiber and connection to existing signals. If possible, we'd like to identify funds to fill a gap in fiber just above this project on the Orem/Provo hill.
- **PIN 10137 - Provo; US-89 (300 S); 100 East to 700 East:** Procurement contract process is complete. Additional micro duct and fiber installation to be done on a separate procurement contract planned for the near future.
- **PIN 10689 - Saratoga Springs; SR-68 Centennial Blvd to Pioneer Crossing:** Project under construction. The contractor will perform integration work. Fiber cutover and splice still not complete.
- **PIN 12158 - Lehi; I-15; Lehi Main St to SR-92:** Working on setting up a Mini TOC for the Technology Corridor offices.
- **PIN 11982 - Saratoga Springs; SR-85 (MVC) SR-73 to 2100 North:** Project Advertising.
- **PIN 9994 – US-89; 220 South P.G. to 500 East A.F. :** Project in Design. ITS Program Management added funds to this project in July to continue all the way to 220 South P.G.
- **PIN 14983 – Continuous Count Stations (CCS) Interstate/Arterial:** NO CHANGE Team met in October and identified potential locations for Utah County count stations. Horrocks will provide an estimate of what it will take to connect all of them.
- **PIN 15275 – Saratoga Springs; SR-68 Village Pkwy to Grandview:** Pending advertisement.
- **PIN 13421 - Springville; SR-77 (400 S); S.F. Main St. to I-15:** NO CHANGE Project has been awarded. PS&E was held the beginning of August. Advertisement anticipated 2018 construction season.
- **PIN 13668 - Lehi; Main St @ US-89/State St Signal(s):** Project has been awarded.

Region 3

- **PIN 13389 – US-40; Daniels Canyon Passing Lane North of Summit:** NO CHANGE Project has been awarded and will construct 2018. This project will add a fiber connection and power to two cameras and an RWIS. ATMS money was added to this project to fill the fiber gap between an existing construction project and this one. With the completion of the project, we will have fiber on US-40 from Heber to Daniel's Summit. The conduit for the fiber was installed by Strata this fall.
- **PIN 10266 - Provo; SR-256; 800 East to Univ Ave BRT:** Project under construction. Distributed the final five CCTV's to the contractor for installation.
- **PIN 13244 - Ut. Co. Signal Interconnect:** NO CHANGE: Fiber installation inspection shows cable was stressed during installation. The damage is within the first 600' on the south end of US-89 in Springville. Working with contractor on repair options.
- **PIN 13061 - American Fork; US-89 @ Main St./200 East:** CCTV was installed (300 east signal). 30 day burn-in started.
- **PIN 14909 – Fiber; Vernal to Manila (US-191/SR-44):** – Federal approval of UEN fiber installation was approved.

Region 4

- **10711 – US-6 Fiber Upgrade Helper to Price:** Waiting for FiberTel (Contacted by Emery Telephone) to finish the fiber drop connection to the CCTV on US-191 near Castle Gate.
- **10783 – SR-18; St. George Blvd to Sunset Blvd:** Project under construction.
- **11467 – I-15; M.P. 22 to M.P. 28 Climbing Lane:** Project Awarded.
- **11515 – SR-9; Rockville to Zion National Park:** Project under construction. Distributed all of the connection electronics to Integrator for programming.
- **12780 – I-15; Bingham Rd. to Dixie Dr.:** Project under construction.
- **14366 – SR-9; Passing Lanes, Midway to Rockville:** In design. Fiber group recommending empty conduit and boxes installation for future use.
- **14908 – ITS upgrades Dixie MPO:** Concept report with on-line interactive map being developed.
- **14912 – US-6/US-191; Helper to Blanding:** Project in substantial completion. 30 day burn-in started.
- **15667 – Region 4 Signal Interconnect:** Generated WTO to develop signal connection concept report for those locations needing connectivity.
- **16471 – SIGNAL: SR-120 @ Technology Dr.; Richfield:** Pre construction site visit scheduled for March.

ITS Standards and Specifications

- Attended the February Standards Committee meeting. The revisions to Standard Drawing AT6 - Conduit Details will be placed on hold until the changes in Administrative Rule 930-7 are complete. Editorials for AT 12 and 13553 – ATMS Conduit were accepted.
- Mike Garcia added the new ATMS Inspection Forms to the Construction Forms web site.
- The 2017 Construction Inspector's Guide Chapter 7 - Traffic Signals, Lighting and ATMS will be sent to the TMD for review.
- Continued to work within UDOT to make a Supplemental for Standard Specification 02821 – Chain Link Fence. The vendor requested that UDOT review the material requirements for fence post piping in order to allow a higher strength and thinner walled pipe.

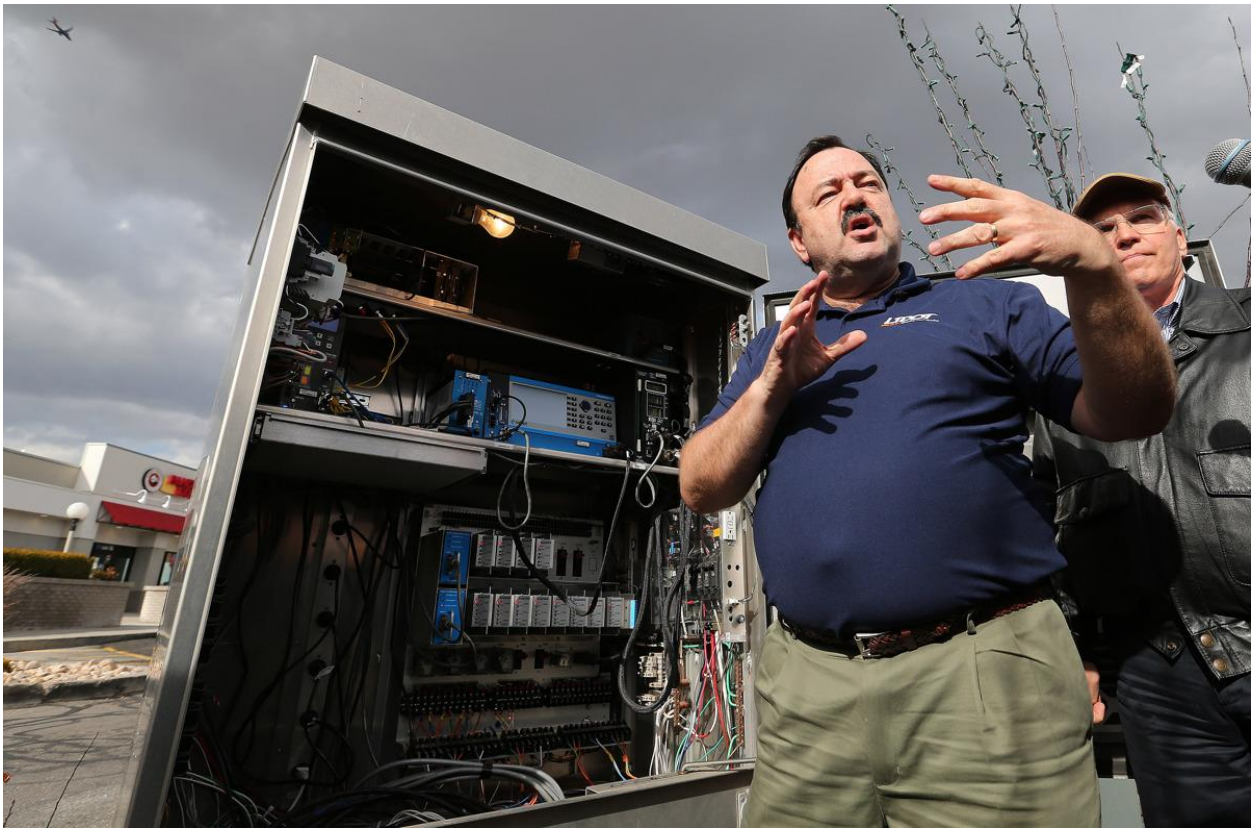
ITS Procurement

- The new ITB for 334C and Basic Size 1 - Traffic Signal Control Cabinets was advertised.
- The new ITB for 336 Traffic Signal Control Cabinets was advertised.
- A meeting was held with Talley and Redline Radio to discuss the AN80i radio's replacements.
- The old Talley, Tessco and Hutton contracts will expire in April 2018. A new Utah Communications Authority statewide contracting process was initiated that will supply broadband radio and accessories to the TMD.
- Work continued for the new contract for the 2070 Advanced Transportation Controller. The RFP process will be used for this contract award. It will be advertised in March 2018.

Special Projects

- WFRC funding applications for the year 2024 were submitted to WFRC. Emissions worksheets will follow when the data is available.
- The ATMS Design Manual of Instruction will be converted to a WIKI format. This is a Pilot Project and will be done using an experienced Technical Writer.

Traffic Operations' very own Blaine Leonard is in the news again.



UDOT smart vehicle network lays groundwork for transportation's future

"Right now, the CAV system will help move transit vehicles through this corridor more efficiently," said Blaine Leonard, UDOT technology and innovation engineer. "But there are all kinds of future applications and uses for this two-way communication and monitoring system."

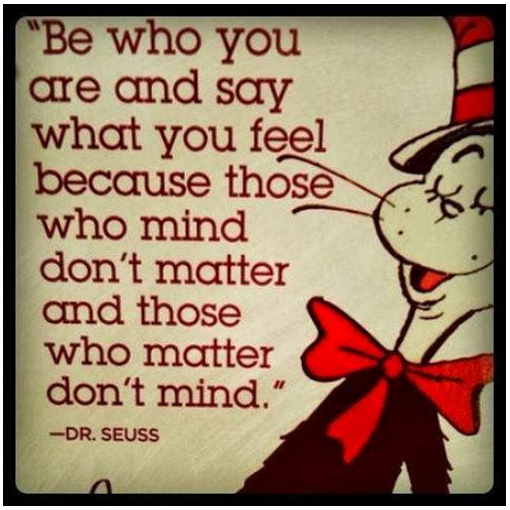
Links to the full article & interview (copy & paste)

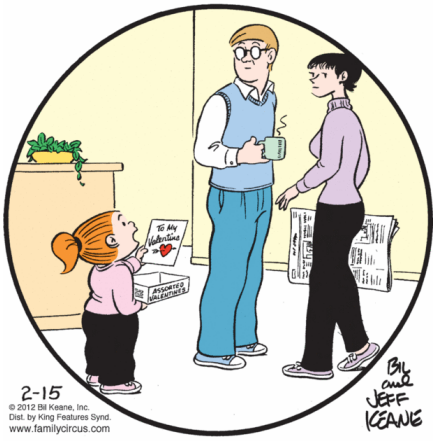
Article

https://www.deseretnews.com/article/900010404/udot-smart-vehicle-network-lays-groundwork-for-transportations-future.html

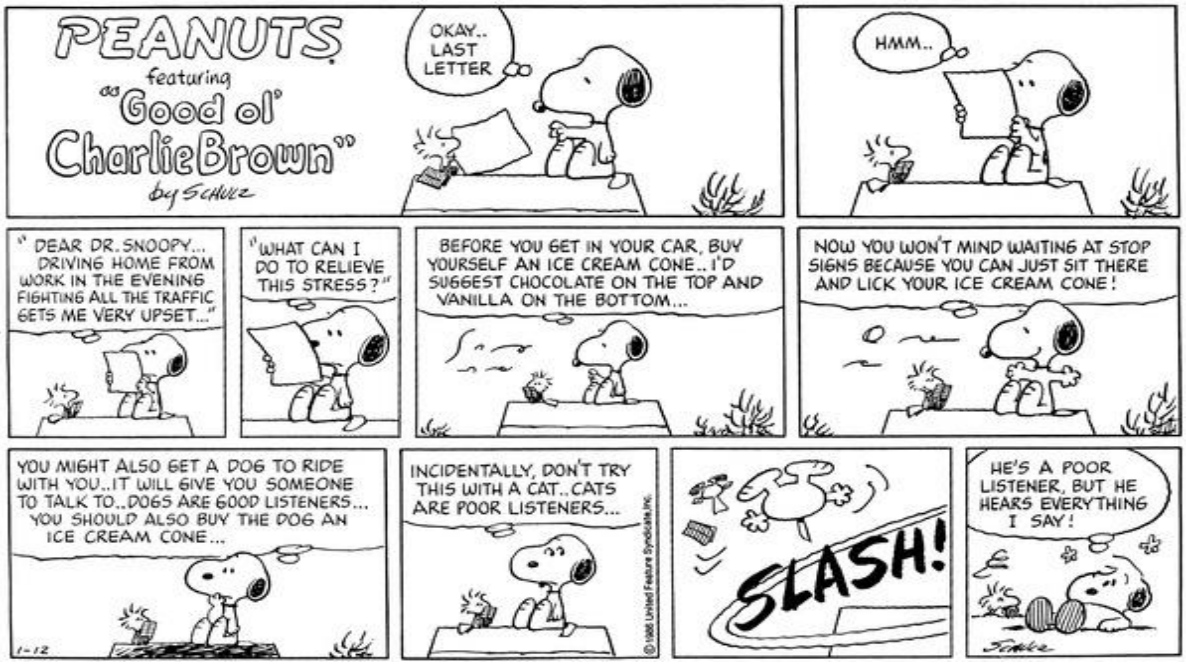
Interview

http://fox13now.com/2018/02/14/udot-unveils-technology-to-help-buses-arrive-on-time/





"I have one left over. Which of you still wants to be my valentine?"



Acronyms

CCTV	Closed Circuit Television	DPS	Department of Public Safety
EIS	Emergency Information System	HAR	Highway Advisory Radio
I2TMS	Integrated Interagency Traffic Management System		
ITS	Intelligent Transportation System	LFOT	Local Field Operations Test
MIC	Manager in Charge	MOT	Maintenance of Traffic
RWIS	Road-Weather Information System	TAC	Technical Advisory Committee
TMD	Traffic Management Division	TMS	Traffic Monitoring Station
TOC	Traffic Operations Center	VMS	Variable Message Sign

Did you know? *Caves breathe. They inhale and exhale great quantities of air when the barometric pressure on the surface changes, and air rushes in or out seeking equilibrium.*

UDOT Keeping Utah Moving